Electronics Letters

INDEX VOLUME 13, 1977

Author index

A

Abdallah, A.A. D.C. solution of bipolar-transistor circuits 396
Adachi, Y., Tokuda, H., and Ikoma, T. (see Tokuda, H.)
Adams, A.R., Vinson, P.J., Pickering, C., Pitt, G.D., and Fawcett, W. 3-level conduction-band structure of GaAs from high-stress and high-field measurements 46
Adams, G.R., Heeks, J.S., and Jackson, J.D. (see Heeks, J.S.)
Adams, M.J. Longitudinal field control in stripe-geometry lasers 236
Adams, M.J., Sladen, F.M.E., and Payne, D.N. (see Sladen, F.M.E.)
Agnew, D., and Neumann, T. (see Neumann, T.)
Agrawal, J.P., Prabhu, K.M.M., and Reddy, V.U. (see Prabhu, K.M.M.)
Ahmadpanah, M., and Crampagne, R. (see Crampagne, R.)
Ahmed, N., Doldan, D.L., Hummels, D.R., and Parikh, D.D. Sequential regression considerations of adaptive filtering 446
Ainscough, J., and Gooberman, G.L. (see Gooberman, G.L.)
Aitchison, C.S. Fast a.d. convertor using a digital discriminator and a v.c.o. 281
Aitchison, C.S., and Bains, A.S. (see Bains, A.S.)
Ajose, S.O., and Mathews, N.A. Equivalent circuit of coaxial-to-microstrip connector over the 8-12 GHz range 465
Ajose, S.O., and Mathews, N.A. Modelling technique for an f.e.t. chip 511
Akello, R.J., Easter, B., and Stephenson, I.M. Effects of microstrip discontinuities on GaAs-m.e.s.f.e.t.-amplifier gain performance 160
Akello, R.J., Easter, B., and Stephenson, I.M. Equivalent circuits of the asymmetric crossover junction 117
Akiba, S., Yamamoto, T., Sakai, K., and Suematsu, Y. (see Yamamoto, T.)
Al-Bandar, Z., and Aleksander, I. (see Aleksander, I.)
Aleksander, I., and Al-Bandar, Z. Adaptively designed test logic for digital circuits 466
Aleksander, I., and Dobree Wilson, M. (see Dobree Wilson, M.)
Allen, P.J., and Lidgey, F.J. (see Lidgey, F.J.)
Allnatt, J.W. Subjective quality of television pictures impaired by linear waveform distortion 546
Allnutt, J.E. Prediction of microwave slant-path attenuation from point rainfall-rate measurements 376
Allnutt, J.E. Variation of attenuation and space diversity with elevation angle on 12 GHz satellite-to-ground radio paths 346
Allnutt, J.E., and MacKenzie, E.C. (see MacKenzie, E.C.)
Allnutt, J.E., Shutie, P.F., and MacKenzie, E.C. (see Shutie, P.F.)
Allnutt, J.E., Shutie, P.F., and MacKenzie, E.G. (see Shutie, P.F.)
Alusow, J.A., and Li, R.C.M. (see Li, R.C.M.)
Amann M.C. and Harth, W. (see, Harth, W.)
Ambrozy, A. Variance noise 137
Ambrozy, A. Variance of simulated 1/f noise 224
Amin, M.B., and Benson, F.A. Nonlinear effects in coaxial cables at microwave frequencies 768
Amoss, J.W., Rucker, C.T., Hill, G.N., and Cox, N.W. (see Rucker, C.T.)
Anderson, A.P., Dawoud, M.M., Bennett, J.C., and Patel, P.D. Search procedure for efficient superdirective array and image enhancement functions 43 Errata 168
Anderson, A.P., and Richards, P.J. Microwave imaging of subsurfaces cylindrical scatters from crosspolar backscatter 617
Anderson, I., and Paterson, N.G. (see Paterson, N.G.)
Anderson, P.J., and Buckingham, M.J. Theory of depletion-layer recombination in silicon p-n junctions 496
Andrzej, C., Stefan, F., and Stanislaw, O. Unified active structure for an arbitrary 2-port network realisation Errata 491
Annecke, K.H. Decision-directed reference carrier generation in an autocorrelation receiver 267
Antypas, G.A., Morkoc, H., Bandy, S.G., and Sankaran, R. (see Morkoc, H.)
Aoki, S., Imoto, K., and Sumi, M. (see Imoto, K.)
Arai, T., Yamauchi, R., Kobayashi, T., and Inada, K. (see Yamauchi, R.)
Arazi, B. Decimation of m-sequences leading to any desired phase shift 213
Arlett, P.L., and Murray-Shelley, R. (see Murray-Shelley, R.)
Armand, M., Salmer, G., Crosnier, Y., and Druelle, Y. (see Salmer, G.)
Arnaud, J., and Rousseau, M. (see Rousseau, M.)
Arnbak, J. E.I.R.P. allocation for a nonlinear satellite channel with multiple transmit beams and carriers 652
Arnodo, C., Bert, G., and Nuzillat, G. (see Bert, G.)
Arnold, J.M. Stratification methods in the numerical analysis of optical-waveguide transmission parameters 680
Arnold, J.M., Crone, G.A.E., and Clarricoats, P.J.B. Comparison of numerical computations of optical-waveguide transmission parameters 273
Arthur, J.W., Cowan, C.F.N., and Mavor, J. Novel linear regression analyser using analogue c.c.d. 751
Arthur, J.W., Denyer, P.B., and Mavor, J. (see Denyer, P.B.)
Arthur, J.W., Mavor, J., and Denyer, P.B. (see Mavor, J.)
Arvillias, A.C., and Maritsas, D.G. Combinational logicfree realisations for high-speed m-sequence generation 500
Asatani, K., and Kimura, T. Nonlinear phase distortion and its compensation in l.e.d. direct modulation 162
Auld, B.A., Beaupre, G.S., and Herrmann, G. Horizontal shear surface waves on a laminated composite 525
Austin, B.A., and Kerdic, I. Transmission of radio signals in deep-level gold mines indirectly via power cables 462

B

Baack, C., Elze, G., and Walf, G. GaAs m.e.s.f.e.t.: a high-speed optical detector 193
Baack, C., Elze, G., Walf, G., Gliemeroth, G., Krause, D., and Neuroth, N. Optical transmission experiment at 1.12 Gbit/s using a graded-index fibre with a length of 1.652 kM 452
Baglee, D.A., Gill, R., Stuart, R.A., and Eccleston, W. Control of defects in silicon dioxide 144
Bahr, A.J., and Petro, J.P. Experimental comparison between induced surface current and scattered electromagnetic waves for a metal target with time-varying characteristics 777
Bailey, D. Winograd's algorithm applied to number-theoretic transforms 548
Bailey, K.R.G., Maclean, T.S.M., and Morris, G. Field-contour plots in parabolic cylinder by method of moments 207
Bains, A.S., and Aitchison, C.S. Active broadbanding of an X-band impatt-diode amplifier 289
Balling, P., and Jacobsen, J. Numerical analysis of small practical feed elements in a ground plane 717
Bandy, S.G., Morkoc, H., Antypas, G.A., and Sankaran, R. (see Morkoc, H.)
Barabas, U. Differential pulse regenerator driven by 1 Gbit/s p.c.m.-type signals from an avalanche photodiode 536
Barabas, U., and Langmann, U. Improved versatile gigahertz pulse generator 28
Barham, C.S., Nicholson, B.F., and Watson, B.K. (see Nicholson, B.F.)
Barker, R.W.J., and Corrin, K.P. Sinusoidal-frequency-halving technique 201
Barker, R.W.J., and Hart, B.L. Versatile precision fullwave rectifier 143
Barker, W.J., and Hart, B.L. Negative current-mirror using n-p-n transistors 311
Barlow, H.M. Low-loss propagation in the dipole-mode along a coaxial waveguide 108
Barsan, R.M. Model for charge propagation in a resistive-gate m.o.s. structure 475
Bartholomew, D.M.L. Optimum design for a broadband microstrip balun 510
Barybin, A.A. Calculation of external circuit current of thin-film semiconductor structures 239
Barybin. A.A. Electric-field-induced anisotropy of thin semiconductor films 243
Batchelor, B.G. Faster nearest-neighbour calculations 304
Batchelor, B.G., and Laing, S.G. Polar-vector representations of edges in pictures 727
Bates, R.H.T., and Tucker, W.H. (see Tucker, W.H.)
Bayraktaroglu, B., Hannah, S.J., and Hartnagel, H.L. Stable charge storage of m.a.o.s. diodes on GaAs by new anodic oxidation 45
Beales, K.J., Day, C.R., Duncan, W.J., and Newns, G.R. Low-loss compound-glass optical fibre 755
Beaupre, G.S., Auld, B.A., and Herrmann, G. (see Auld, B.A.)

Beck, H.G.E., and Helvoort, G.J.M., van (see Helvoort, G.J.M., van)
Beha, H. Asymmetric 2-Josephson-junction interferometer as a logic gate 218
Beha, H. Two-Josephson-junction interferometer memory cell for n.d.r.o. 596
Bell, D.A. Codes from cubic residues 91
Bell, R.R. Calibration of 20 and 30 GHz radiometers by using the ATS-6 satellite beacons 412
Benasson, A., Rabier, A., and Harrop, P. Novel optimisation procedure applied to the minimisation of the ripple of a microwave amplifier 685
Beneking, H., and Tsironis, C. (see Tsironis, C.)
Benelli, G., Bianciardi, C., and Cappellini, V. Redundancy bounds for multiple-burst error-correcting codes 389
Bennett, J.C., and Godwin, M.P. Necessary criteria for the diagnosis of panel misalignments in large reflector antennas by microwave metrology 463
Bennett, J.C., Anderson, A.P., Dawoud, M.M., and Patel, P.D. (see Anderson, A.P.)
Bennett, L.A.M. Improved forms of threshold-logic-function implementation 368
Bennett, L.A.M. Modified programmable logic array with more product terms 443
Bennett, L.A.M. Threshold-logic-functions and the exclusive-or 195
Bennett, S.D., and Chambers, J. Novel variable-focus ultrasonic transducer 110
Benson, F.A., and Amin, M.B. (see Amin, M.B.)
Bernard, J.J., Hazan, J.P., and Kuppers, D. (see Hazan, J.P.)
Berry, R.W., Hooper, R.C., and White, B.R. Preliminary test results on a 140 Mbit/s experimental optical-fibre transmission system 358
Bert, G., Nuzillat, G., and Arnodo, C. Femto-joule logic circuit using normally-off GaAs m.e.s.f.e.t.s. 644
Berte, M. Acoustic-bulk-wave resonators and filters operating in the fundamental mode at frequencies greater than 100 MHz 248
Bevensee, R.M. Commennts of effective area of an antenna 336
Bhargava, D.K., Dutta Roy, S.C., and Prasad, S.C. (see Dutta Roy, S.C.)
Bhargava, V.K. Codes from cubic residues 732
Bialko, M., and Czarnul, Z. (see Czarnul, Z.)
Bianciardi, C., Benelli, G., and Cappellini, V. (see Benelli, G.)
Bianciardi, E., Rizzoli, V., and Someda, C.G. Spatial correlation of field intensity in incoherently illuminated multimode fibres 25
Biey, M. MUCROER polynomials in passive-filter design 730
Biey, M., and Premoli, A. Maximally flat approximation of lowpass RC active filters with multiple real pole 76
Billings, S.A., and Fakhouri, S.Y. Identification of nonlinear systems using the Wiener model 502
Bini, M., Millanta, L., and Rubino, N. Thin-film magnetostatic amplifier: analytical expressions of dispersion and gain properties 114
Bird, T.S. Propagation and radiation characteristics of rib waveguide 401
Blakey, P.A. Computer simulation of charge generation in trapatts 434
Blenkinsop, I.D., Harding, W.R., and Wight, D.R. Interface-recombination-controlled minority-carrier lifetime in n-type GaP 14
Blocker, T.G., Macksey, H.M., and Doerbeck, F.H. (see Macksey, H.M.)
Bloodworth, G.G., Traynar, C.P., Roberts, P.C.T., and Taylor, R.G. (see Traynar, C.P.)
Blundell, R., Morgan, D.V., and Howes, M.J. Radiation-induced degradation of ohmic contacts 483
Bonnet, M., Lacombe, J., Duchemin, J.P., and Huyghe, D. (see Lacombe, J.)
Booer, A.K., Chambers, J., and Mason, I.M. Fast numerical algorithm for the recompression of dispersed time signals 453
Booer, A.K., Chambers, J., and Mason, I.M. Numerical holographic reconstruction by a 'projective transform' 569
Booker, G.R., Sadana, D.K., and Fletcher, J. (see Sadana, D.K.)
Borden, P., and Kino, G.S. Input correlation with the a.s.w. storage correlator 470
Borrego, J.M., Gutmann, R.J., Chudzicki, M., and Moghe, S. Determination of GaAs m.e.s.f.e.t. equivalent-circuit parameters from I/V and 1 MHz measurements 756
Borrego, J.M., Vyas, H.P., and Gutmann, R.J. (see Vyas, H.P.)
Bose, D.N., and Jani, B.J. Microwave modulation by amorphous-semiconductor switches 451
Bosnjakovic, P., and Kon, J. New voltage-to-frequency convertor with nonlinearity correction 05
Braddock, P.W., and Hodges, R.D. High-power 10%-tuning-bandwidth varactor-controlled impatt oscillator/amplifier 179
Braddock, P.W., and Hodges, R.D. High-power pulsed and c.w. silicon double-drift impatt amplifiers at X-band 176
Braddock, P.W., Genner, R., and Richmond, W. (see Genner, R.)
Brand, H., and Krause, N. Tunable millimetre-wave ferrite bandpass filter with reduced biasing field 576
Braunig, D., and Dehmel, G. (see Dehmel, G.)
Brittingham, J.N., Miller, E.K., and Okada, J.T. Bivariate interpolation approach for efficiently and accurately modelling antennas near a halfspace 690
Brittingham, J.N., Miller, E.K., and Willows, J.L. (see Miller, E.K.)
Brookbanks, D.M. Effect of thermal impedance on chirp characteristics of high-efficiency pulsed InP oscillators 697
Brotherton, S.D., Gill, A., and King, M.J. C.C.D.-addressed liquid-crystal displays 270
Brown, L., and Sedra, A.S. New multifunction biquadratic filter circuit with inherently stable Q-factor 719
Browning, T.I., and Lewis, M.F. New family of bulk-acoustic-wave devices employing interdigital transducers 128
Buckingham, M.J., and Anderson, P.J. (see Anderson, P.J.)
Buehler, E., Dentai, A.G., Lee, T.P., and Burrus, C.A. (see Dentai, A.G.)
Bunn, P.R., and Gough, N.E. (see Gough, N.E.)
Burke, B.E., and Lindley, W.T. New c.c.d. programmable transversal filter 521
Burrus, C.A., Dentai, A.G., Lee, T.P., and Buehler, E. (see Dentai, A.G.)
Butcher, D.N., and Sealy, B.J. Electrical properties of thermal oxides on GaAs 558
Button, M.R., and Murgatroyd, P.N. Stabilising circuit for a tuned-circuit magnetic levitator 477

C

Cain, G.D., and Morling, R.C.S. C.C.D. processor for simultaneous time stretching and signal averaging 269
Califano, F.P., Caruso, A., Spirito, P., and Vitale, G.F. New avalanche-injection-controlled switch 196
Cannell, G.J. Continuous measurement of optical-fibre attenuation during manufacture 125
Cappellini, V., Benelli, G., and Bianciardi, C. (see Benelli, G.)
Carel, M., Henaff, Jeannine., Lainey, G., and Labasse, M. (see Henaff, Jeannine.)
Carlson, E.R., and Schneider, M.V. (see Schneider, M.V.)
Carter, C.R. Efficient synchronisation signal for the switched satellite 646
Carter, S.F., and Faulkner, E.A. Accurate broadband square-to-triangle convertor 381
Carter, S.F., and Faulkner, E.A. New phase-sensitive rectifier circuit 439
Cartwright, N.E., and Tattersal, R.L.O. Simultaneous measurements of radio refractivity and multipath fading on 2 July 1975 at 11, 19 and 36 GHz on a 7.5 km path 208
Caruso, A., Califano, F.P., Spirito, P., and Vitale, G.F. (see Califano, F.P.)
Carver, J., and Hobson, G.S. Interference-rejection filter using charge-coupled devices 732
Cassaboom, J.A., Chang, C.T., and Taylor, H.F. (see Chang, C.T.)
Castagne, R., Meriau, A., Laval, R., and Laval, S. (see Meriau, A.)
Cattermole, K.W., and Munoz-Rodriguez, D. (see Munoz-Rodriguez, D.)
Chadha, R., and Lane, J.A. Effect of scattering in measurement of rain attenuation by passive radiometry 177
Chalstrom. R.E., Schaumann, R., and Laker, K.R. (see Schaumann, R.)
Chamberlain, S.G., Roulston, D.J., and Desai, S.P. Optical silicon lifetime measurements in heavily doped diffused regions 544
Chambers, J., and Bennett, S.D. (see Bennett, S.D.)
Chambers, J., Booer, A.K., and Mason, I.M. (see Booer, A.K.)
Chambers, J., Booer, A.K., and Mason, I.M. (see Booer, A.K.)
Chang, C.T., Cassaboom, J.A., and Taylor, H.F. Fibre-optic delay-line devices for r.f. signal processing 678
Chang, K., and Sabnis, A.G. (see Sabnis, A.G.)
Charton, G.H., Jaussaud, P., de Oliveira, A.D., and Parriaux, O. Fast fabrication method for thick and highly multimode optical waveguides 763
Checcacci, P.F., Falciai, R., and Scheggi, A.M. Influence of a central depression on the dispersion characteristics of a graded-index profile 378
Chen, Wai-Kai Determinant of the null return-difference matrix 306
Chignell, R.J., and Munro, D. Matrix description of scattering problems 353
Chow, P.E.K., Lee, P.F., and Chow, Q.S. (see Lee, P.F.)
Chow, Q.S., Lee, P.F., and Chow, P.E.K. (see Lee, P.F.)
Chow, Y.M., Chu, P.L., and Saekeang, C. (see Chu, P.L.)
Chu, P.L. Nondestructive measurement of index profile of an optical-fibre preform 736
Chu, P.L., Saekeang, C., and Chow, Y.M. Determination of refractive index and ellipticity of an unclad elliptical optical fibre 41
Chudzicki, M., Borrego, J.M., Gutmann, R.J., and Moghe, S. (see Borrego, J.M.)
Chugh, R.K., and Shafai, L. Design of high-efficiency antennas employing dielectric-cone feeds 169
Chung, K.S., and Ingram, D.G.W. Hybrid waveform equalisation scheme for coaxial p.c.m. systems 332
Chung, P.S., and Pantell, R.H. Properties of X-ray guides 527
Clarricoats, P.J.B., Arnold, J.M., and Crone, G.A.E. (see Arnold, J.M.)
Clarricoats, P.J.B., Parini, C.G., and Oliver, A.D. (see Parini, C.G.)
Coche, A., and Kerllenevich, B. (see Kerllenevich, B.)
Cochrane, P. Through pulse measurement technique for assessing the forward echo performance of coaxial cables 02
Cochrane, P., and Perkins, J.K. Wideband equalisation and signal averaging applied to the pulse echo return loss testing of telecommunication coaxial cables 481
Cochrane, P., and Rain, A. Through-pulse measurements on installed 1.2/4.4mm coaxial cables: two examples 307
Coldren, L.A. Coupled slot waveguide s.a.w. resonators 559
Coldren, L.A., Haus, H.A., and Wang, K.L. Experimental verification of mode shape in s.a.w. grating resonators 642
Cole, R.S., Ho, K.L., and Mavrokoukoulakis (see Ho, K.L.)
Cole, R.S., Mavrokoukoulakis, N.D., and Ho, K.L. (see Mavrokoukoulakis, N.D.)
Collins, J.H., Wu, H.J., Smith, C.N., Jr., and Owens, J.M. (see Wu, H.J.)
Colquhoun, A., and Kohn, E. (see Kohn, E.)
Corbett, J.M. Calculation of wideband random-noise powers in television systems 530
Corrin, K.P., and Barker, R.W.J. (see Barker, R.W.J.)
Court, R.A., and Steel, J. (see Steel, J.)
Cowan, C.F.N., Arthur, J.W., and Mavor, J. (see Arthur, J.W.)
Cox, N.W., Rucker, C.T., Amoss, J.W., and Hill, G.N. (see Rucker, C.T.)
Crampagne, R., and Ahmadpanah, M. Interesting microwave filtering properties of C-section periodic structure 199
Craven, G., and Thomas, R.R. Waveguide antenna switches using p-i-n diodes 518
Crawford, M.J., and Finch, J.W. (see Finch, J.W.)
Crone, G.A.E., Arnold, J.M., and Clarricoats, P.J.B. (see Arnold, J.M.)
Crosnier, Y., Salmer, G., Druelle, Y., and Armand, M. (see Salmer, G.)
Cullen, A.L., Gallop, J., and Sloane, Anne E. Experimental verification of the electromagnetic analogue of a theorem due to Dean 570
Culshaw, B., Davies, D.E.N., and Kingsley, S.A. Acoustic sensitivity of optical-fibre waveguides 760
Cuong, D.M., and Hasler, M. New synthesis cycle for LC impedances 630
Czarnul, Z., and Bialko, M. Utilisation of a single inductorless neuristor line section as a voltage-to-frequency convertor 251

D

D'Azzo, J.J., and Porter, B. Algorithm for the synthesis of state-feedback regulators by entire eigenstructure assignment 230
D'Azzo, J.J., and Porter, B. (see Porter, B.)
Dakss, M.L., and Fulenwider, J.E. (see Fulenwider, J.E.)
Dakss, M.L., and Schilb, D.B. (see Schilb, D.B.)
Dalle Mese, E., Giuli, D., and Pellegrini, M. Fixed-lag smoother for digital channel equalisation 366
Darlington, E.H., Roberts, J.B.G., Edwards, R.D., and Simons, R.F. (see Roberts, J.B.G.)
Davidson, E., and Helszajn, I. Suppression of higher-order modes in subsidiary resonance waveguide limiters 585
Davie, M.C., Mavor, J., and Denyer, P.B. (see Mavor, J.)
Davies, D.E.N., and Rizk, M. Electronic steering of multiple nulls for circular arrays 669
Davies, D.E.N., Culshaw, B., and Kingsley, S.A. (see Culshaw, B.)
Davio, M., and Deschamps, J.-P. Synthesis of some partially symmetric boolean functions by ternary algebra 473
Dawoud, M.M., Anderson, A.P., Bennett, J.C., and Patel, P.D. (see Anderson, A.P.)
Day, C.R., Beales, K.J., Duncan, W.J., and Newns, G.R. (see Beales, K.J.)
De La Rue, R.M., Pelosi, P.M., Vandenbulcke, P., and Wilkinson, C.D.W. (see Pelosi, P.M.)

De La Rue, R.M., and Sasaki, H. (see Sasaki, H.)
De Mey, G., Jacobs, B., and Fransen, F. Influence of junction roughness on solar-cell characteristics 657
De Mey, G., and De Visschere, P. (see De Visschere, P.)
de Oliveira, A.D., Chartier, G.H., Jaussaud, P., and Parriaux, O. (see Chartier, G.H.)
De Visschere, P., and De Mey, G. Integral-equation approach to the abrupt-depletion approximation in semiconductor components 104
De Waard, P.J. Stripe-geometry d.h. lasers with linear output/current characteristics 400
Deacon, J.M., and Morgan, D.P. (see Morgan, D.P.)
Dehmel, G., and Braunig, D. Change of some properties of junction field-effect transistors after ionising irradiation 601
Dekkers, J.J.M., Venema, A., and Humphryes, R.F. (see Venema, A.)
Dentai, A.G., Lee, T.P., Burrus, C.A., and Buehler, E. Small-area, high-radiance c.w. InGaAsP l.e.d.s emitting at 1.2 to 1.3μm 484
Dentai, A.G., Muska, W.M., Li, Tingye,, and Lee, T.P. (see Muska, W.M.)
Denyer, P.B., Arthur, J.W., and Mavor, J. Monolithic, programmable analogue c.c.d. transversal filter 739
Denyer, P.B., Mavor, J., and Arthur, J.W. (see Mavor, J.)
Denyer, P.B., Mavor, J., and Davie, M.C. (see Mavor, J.)
Derosier, R.M., and Tynes, A.R. (see Tynes, A.R.)
Desai, S.P., Chamberlain, S.G., and Roulston, D.J. (see Chamberlain, S.G.)
Deschamps, J.-P., and Davio, M. (see Davio, M.)
Detaint, J. Zero temperature coefficients in overtone lithium-tantalate thickness-mode resonators 20 Errata 336
Dissanayake, A.W., and Watson, P.A. Forward scatter and cross-polarisation from spheroidal ice particles 140
Dissanayake, A.W., McEwan, N.J., Watson, P.A., Haworth, D.P., and Vakili, V.T. (see McEwan, N.J.)
Dissanayake, A.W., and Watson, P.A. (see Watson, P.A.)
Dobree Wilson, M., and Aleksander, I. Pattern-roecognition properties of r.a.m./r.o.m. arrays 253
Dods, A.S.M., Patterson, E.W., and Hannah, J.M. (see Patterson, E.W.)
Doerbeck, F.H., Macksey, H.M., and Blocker, T.G. (see Macksey, H.M.)
Doldan, D.L., Ahmed, N., Hummels, D.R., and Parikh, D.D. (see Ahmed, N.)
Druelle, Y., Salmer, G., Crosnier, Y., and Armand, M. (see Salmer, G.)
Dubost, G. Array of flat symmetrical dipoles operating at the first antiresonance frequency 672
Duchemin, J.P., Lacombe, J., Bonnet, M., and Huyghe, D. (see Lacombe, J.)
Duncan, F.G., and Zissos, D. (see Zissos, D.)
Duncan, W.J., Beales, K.J., Day, C.R., and Newns, G.R. (see Beales, K.J.)
Dunning-Davies, J., and Stephenson, F.W. (see Stephenson, F.W.)
Dutta Roy, S.C., Prasad, S.C., and Bhargava, D.K. Equal-valued grounded-capacitor active RC realisation of all-pole transfer functions 566

E

Easter, B., Akello, R.J., and Stephenson, I.M. (see Akello, R.J.)
Easter, B., Akello, R.J., and Stephenson, I.M. (see Akello, R.J.)
Eastman, L.F., Ip, K.T., and Wrick, V.L. (see Ip, K.T.)
Eaton, J.L. Slant-path attenuation through rainstorms 455
Eccleston, W., Baglee, D.A., Gill, R., and Stuart, R.A. (see Baglee, D.A.)
Edwards, R.D., Roberts, J.B.G., Darlington, E.H., and Simons, R.F. (see Roberts, J.B.G.)
Eickhoff, W., and Krumpholz, O. Pulse response and microbending losses of an optical glass-fibre waveguide with a bump in its index profile 256
Eickhoff, W., Marschall, P., and Schlosser, E. Transparent, highly sensitive GaAs/(GaA1)As photodiode 493
Ekanayake, M., and Taylor, D.P. Intersymbol-interference error bounds for hard-limited satellite channels 498
El-Sherief, H., and Sinha, N.K. (see Sinha, N.K.)
Elliot, R.D., and Poulton, G.T. Diffraction-optimised shaped-beam reflector antennas Errata 491
Elze, G., Baack, C., and Walf, G. (see Baack, C.)
Elze, G., Baack, C., Walf, G., Gliemeroth, G., Krause, D., and Neuroth, N. (see Baack, C.)
Eng, S.T., Tell, R., and Torphammar, P. (see Tell, R.)
Esdale, D.J., Steele, R., and Goodman, D.J. (see Steele, R.)
Evans, B.G., and Holt, A.R. Crosspolarisation phase due to ice crystals on microwave satellite paths 664
Evans, B.G., and Holt, A.R. Scattering amplitudes and crosspolarisation of ice particles 342
Evans, N.E., and Gamble, H.S. Intracell c.c.d. programmable correlator 69
Eve, M. Novel technique for the measurement of the differential mode attenuation in graded-index fibres 744
Eve, M. Statistical model for the prediction of the bandwidth of an optical route Errata 591

F

Fairman, R.D., Nowak, M.M., and Terzian, P.A. (see Nowak, M.M.)
Fakhouri, S.Y., and Billings, S.A. (see Billings, S.A.)
Falciai, R., Checcacci, P.F., and Scheggi, A.M. (see Checcacci, P.F.)
Faltin, L. Stepped-impedance phase shifters 524
Faruqui, M.N., Lamba, T.S., and Steele, R. (see Lamba, T.S.)
Faulkner, E.A., and Carter, S.F. (see Carter, S.F.)
Favennec, P.N., Henry, L., and Janicki, T. Implantation de selenium dans le $Ga_{1-x}Al_xAs$ (Implanatation of selenium into $Ga_{1-x}Al_xAs$) 338
Fawcett, W., Adams, A.R., Vinson, P.J., Pickering, C., and Pitt, G.D. (see Adams, A.R.)
Fawcett, W., Hill, G., Robson, P.N., and Majerfeld, A. (see Hill, G.)
Fei, F.S., and Mattauch, R.J. (see Mattauch, R.J.)
Feldmann, M., and Henaff, J. (see Henaff, J.)
Fellgett, P.B. Phase filtering with time reversal 153
Fenwick, D.M., and Steele, R. Predictable sample error detector and a planar prediction corrector for removal of isolated transmission errors in Walsh-Hadamard transformed pictures 08
Fichtner, W., and Hochmair, E. Current-kink noise of n-channel enhancement e.s.f.i.-m.o.s. s.o.s. transistors 675
Fields, E.L., and Soderstrand, M.A. (see Soderstrand, M.A.)
Fieret, J., Kwakernaak, A., and Middelhoek, S. Large linear area light-spot-position-sensitive photodiode 422
Filicori, F. Tolerance assignment in nonconvex acceptability regions 79
Finch, J.W., and Crawford, M.J. Novel position sensor for magnetic suspension 735
Fjallbrant, T. Method of data reduction of sampled speech signals by using nonuniform sampling and a time-variable digital filter 334
Fletcher, J., Sadana, D.K., and Booker, G.R. (see Sadana, D.K.)
Foxall, T., Ibrahim, A., and Hupe, G. Double-split-electrode transversal filter 323
Fransen, F., De Mey, G., and Jacobs, B. (see De Mey, G.)
Friedman, N., Salama, C.A.T., Holmes, F.E., and Thompson, P.M. Multivalued integrated-injection-logic (M^2L) full adder 135
Fulenwider, J.E., and Dakss, M.L. Hand-held tool for optical-fibre end preparation 578
Furui, Y., Yoshida, K., Sentsui, S., and Kuroha, T. (see Yoshida, K.)

G

Gajski, D.D., and Vora, C. High-speed modulo-3 generator 770
Gallop, J., Cullen, A.L., and Sloane, Anne E. (see Cullen, A.L.)
Galvin, P., and Tomlinson, G.H. (see Tomlinson, G.H.)
Gamble, H.S., and Evans, N.E. (see Evans, N.E.)
Gambling, W.A., and Matsumura, H. Modes in curved step-index optical fibres 532
Gambling, W.A., and Matsumura, H. Simple characterisation factor for practical single-mode fibres 691
Gambling, W.A., Matsumura, H., and Sammut, R.A. Mode shift at bends in single-mode fibres 695
Gambling, W.A., Payne, D.N., and Matsumura, H. Cut-off frequency in radially inhomogeneous single-mode fibre 139
Gambling, W.A., Payne, D.N., Matsumura, H., and Norman, S.R. Measurement of normalised frequency in single-mode optical fibres 133
Garcia, A., Lopez, C., and Munoz, E. (see Lopez, C.)
Garde, P. Schemes for increased output-voltage swing from operational amplifiers 111
Gardiol, F.E., and Haldemann, P. Numerical instabilities of the moment method in waveguide calculations 694
Geckeler, S. Group delay in graded-index fibres with non-power-law refractive profiles 29
Geckeler, S. Nonlinear profile dispersion aids optimisation of graded-index fibres 440
Genner, R., Richmond, W., and Braddock, P.W. Thick-film 3-stage m.i.c. impatt-diode-amplifier on ferrite 193
Gerzon, M.A. Effect of gain control and modulation on harmonic nonlinear operators, with applications to audio signal processing 118
Ghobrial, S.I. Loss in gain and boresight cross-polarisation in reflector antennas with surface errors 623
Gibbs, J.E. 'Instant' Fourier transform 122
Gilbert, B. Circuits for the precise synthesis of the sine function 506
Gilbert, B. Novel method for amplitude measurement of signals up to microwave frequencies 107
Gill, A., Brotherton, S.D., and King, M.J. (see Brotherton, S.D.)
Gill, R., Baglee, D.A., Stuart, R.A., and Eccleston, W. (see Baglee, D.A.)
Giuli, D., Dalle Mese, E., and Pellegrini, M. (see Dalle Mese, E.)
Gliemeroth, G., Baack, C., Elze, G., Walf, G., Krause, D., and Neuroth, N. (see Baack, C.)
Gloge, D. L.E.D. design for fibre systems 399
Godwin, M.P., and Bennett, J.C. (see Bennett, J.C.)
Goedbloed, J.J., and Van Iperen, B.B. (see Van Iperen, B.B.)
Golfin, N.G., Howell, R.G., and Thirlwell, J. (see Howell, R.G.)
Gooberman, G.L., and Ainscough, J. Digital phase-shift generator 772
Goodman, D.J., Steele, R., and Esdale, D.J. (see Steele, R.)
Gottsmann, H., and Krumpholz, O. (see Krumpholz, O.)
Gough, N.E., and Bunn, P.R. Optimal parameter surfaces for 2nd-order discrete control systems 132
Grant, P.M., and Jack, M.A. (see Jack, M.A.)
Grant, P.M., Jack, M.A., and Park, D.G. (see Jack, M.A.)
Grimbleby, J.B. Simple electronically tunable 2nd-order active filter 258
Groubert, E., and Peransin, J.M. (see Peransin, J.M.)
Grzegorek, Z., and Szulakiewicz, P. Formulas for spectra of periodic frequency-shift-keyed signals 90
Guile, A.E., and Hitchcock, A.H. (see Hitchcock, A.H.)
Gurst, G.C., Holmes, W.H., and Zakarevicius, R.A. Symbol-by-symbol jitter measurement in high-speed digital systems 81
Gutmann, R.J., Borrego, J.M., Chudzicki, M., and Moghe, S. (see Borrego, J.M.)
Gutmann, R.J., Vyas, H.P., and Borrego, J.M. (see Vyas, H.P.)

H

Haine, J. New active quadrature phase-shift network 216
Haine, J.L. Simple design procedure for single-sideband crystal filters 687
Hajj, I.N. Solution of interconnected subsystems 78
Haldemann, P., and Gardiol, F.E. (see Gardiol, F.E.)
Hall, M.P.M. Variability of atmospheric water-vapour concentration and its implications for microwave-radio-link planning 650
Hannah, J.M., Patterson, E.W., and Dods, A.S.M. (see Patterson, E.W.)
Hannah, S.J., Bayraktaroglu, B., and Hartnagel, H.L. (see Bayraktaroglu, B.)
Hansen, J.E., and Shafai, L. Crosspolarised radiation from waveguides and narrow-angle horns 313
Hansen, J.E., and Shafai, L. (see Shafai, L.)
Harding, W.R., Blenkinsop, I.D., and Wight, D.R. (see Blenkinsop, I.D.)
Harris, D.J., and Lee, K.W. Groove guide as a low-loss transmission system for short millimetric waves 775
Harrop, P., Benasson, A., and Rabier, A. (see Benasson, A.)
Hart, B.L. Voltage-sweep-circuit technique employing capacitance magnification 130
Hart, B.L., and Barker, R.W.J. (see Barker, R.W.J.)
Hart, B.L., and Barker, W.J. (see Barker, W.J.)
Harth, W., Amann, M.-C. Modulation characteristics of double heterostructure superluminescence diods 291
Hartnagel, H.L., Bayraktaroglu, B., and Hannah, S.J. (see Bayraktaroglu, B.)
Hartog, A.H., and Payne, D.N. (seePayne, D.N.)
Hasegawa, H., and Okizaki, H. M.I.S. and Schottky slow-wave coplanar striplines on GaAs substrates 663
Hashizume, N., and Kataoka, S. Gunn-effect memory device using the charge accumulation on a Schottky-trigger electrode 60

Hashizume, N., Kataoka, S., and Tomizawa, K. Gunn-effect high-speed carry finding device for 8 bit binary adder 637
Hashizume, N., Kataoka, S., and Tomizawa, K. Measurement of the electron accumulation on two Schottky diodes connected metal to metal 495
Hasler, M., and Cuong, D.M. (see Cuong, D.M.)
Hata, S., Kajiyama, K., and Mizushima, Y. Performance of p-i-n- photodiodes compared with avalanche photodiode in the longer-wavelength region of 1 to 2 μm 668
Hata, T., and Shimizu, Y. (see Shimizu, Y.)
Haus, H.A. Modes in s.a.w. grating resonators 12
Haus, H.A., and Schmidt, R.V. Cascaded s.a.w. gratings as passband filters 445
Haus, H.A., Coldren, L.A., and Wang, K.L. (see Coldren, L.A.)
Haw, M.F., Yu, C., and Hsu, H. (see Yu, C.)
Haworth, D.P., McEwan, N.J., and Watson, P.A. Crosspolarisation for linearly and circularly polarised waves propagating through a population of ice particles on satellite-earth paths 703
Haworth, D.P., Watson, P.A., and McEwan, N.J. Model for the effect of electric fields on satellite-earth microwave radio propagation 562
Haworth, D.P., McEwan, N.J., Watson, P.A., Dissanayake, A.W., and Vakili, V.T. (see McEwan, N.J.)
Hayashi, S., Shibukawa, A., Katsui, A., and Iwamura, H. (see Shibukawa, A.)
Hazan, J.P., Bernard, J.J., and Kuppers, D. Medium-numerical-aperture low-pulse-dispersion fibre 540
Heeks, J.S., Jackson, J.D., and Adams, G.R. Spectrum analysis with a c.c.d. delay line 738
Heginbotham, W.B., Waddon, K., and Pugh, A. (see Waddon, K.)
Heiserman, J., and Wickramasinghe, H.K. (see Wickramasinghe, H.K.)
Helszajn, I., and Davidson, E. (see Davidson, E.)
Helvoort, G.J.M., van, and Beck, H.G.E. Model for the excitation of 1/f noise by high-frequency a.c. signals 542
Henaff, J. New acoustic-surface-wave zero-temperature cuts in Tl_3 VS_4 300
Henaff, J., and Feldmann, M. New acoustic-surface-wave zero-temperature cuts in Tl_3TaSe_4 661
Henaff, Jeannine., Carel, M., Lainey, G., and Labasse, M. 4-phase p.s.k. differential demodulator using a.s.w. delay lines 586
Hendry, A., and McCormick, G.C. (see McCormick, G.C.)
Henry, L., Favennec, P.N., and Janicki, T. (see Favennec, P.N.)
Hensel, P. Spark-induced fracture of optical fibres 603
Hensel, P. Triple-ball connector for optical fibres 734
Herrmann, G., Auld, B.A., and Beaupre, G.S. (see Auld, B.A.)
Hicks, D.S. Null steering in linear arrays by using amplitude control of signals in the feeder network 198
Hill, G., Robson, P.N., Majerfeld, A., and Fawcett, W. Effect of ionised impurity scattering on the electron transit time in GaAs and InP f.e.t.s. 235
Hill, G.N., Rucker, C.T., Amoss, J.W., and Cox, N.W. (see Rucker, C.T.)
Hill, K.O., Johnson, D.C., Kawasaki, B.S., and Kato, D. (see Johnson, D.C.)
Hirai, M., and Uchida, N. Melt splice of multimode optical fibre with an electric arc 123
Hitchcock, A.H., and Guile, A.E. Energy balance at arc cathode root on copper with oxide films above 25 nm thickness 172
Ho, K.L., Mavrokoukoulakis, and Cole, R.S. N.D. Wavelength dependence of scintillation fading at 110 and 36 GHz 181
Ho, K.L., Mavrokoukoulakis, N.D., and Cole, R.S. (see Mavrokoukoulakis, N.D.)
Hobson, G.S., and Carver, J. (see Carver, J.)
Hochmair, E., and Fichtner, W. (see Fichtner, W.)
Hockham, G.A., and Kumar, A. (see Kumar, A.)
Hodges, R.D., and Braddock, P.W. (see Braddock, P.W.)
Hoffman, M. Edge condition and mode-matching solutions in the presence of gyrotropic media 56
Holder, J.E. New television test waveform 264
Hollerl, K., Thurnbeck, J., and Reiter, L. Retention grooves for optical-fibre connectors 74
Holmes, F.E., Friedman, N., Salama, C.A.T., and Thompson, P.M. (see Friedman, N.)
Holmes, W.H., Hurst, G.C., and Zakarevicius, R.A. (see Hurst, G.C.)
Holt, A.R., and Evans, B.G. (see Evans, B.G.)
Hooper, R.C., Berry, R.W., and White, B.R. (see Berry, R.W.)
Horayama, M., Takada, T., and Yagasaki, T. (see Takada, T.)
Horiguchi, M., Kawachi, M., Kawana, A., and Miyashita, T. (see Kawachi, M.)
Horiguchi, M., Miyashita, T., and Kawana, A. (see Miyashita, T.)
Hosaka, T., Kawana, A., Miyashita, T., Nakahara, M., and Kawachi, M. (see Kawana, A.)
Howard, A.M., Oxley, C.H., and Purcell, J.J. (see Oxley, C.H.)
Howell, R.G. Crosspolar phase variations at 20 and 30 GHz on a satellite-earth path 405
Howell, R.G., Thirlwell, J., and Golfin, N.G. Simultaneous 20 and 30 GHz attenuation measurements on a satellite-earth path 640
Howell, R.G., Thirlwell, J., and Knox, D.M. (see Thirlwell, J.)
Howes, M.J., Blundell, R., and Morgan, D.V. (see Blundell, R.)
Howes, M.J., Palmstrom, C.J., and Morgan, D.V. (see Palmstrom, C.J.)
Hsu, H., Yu, C., and Haw, M.F. (see Yu, C.)
Huish, P.W. Observed behaviour of high-efficiency impatt diodes over a 30% frequency range 178
Hullett, J.L., and Muoi, T.V. Referred impedance noise analysis for feedback amplifiers 387
Hullett, J.L., Muoi, T.V., and Moustakas, S. High-speed optical preamplifiers 688
Hummels, D.R., Ahmed, N., Doldan, D.L., and Parikh, D.D. (see Ahmed, N.)
Humphreys, R.F., and Venema, A. (see Venema, A.)
Humphryes, R.F., Venema, A., and Dekkers, J.J.M. (see Venema, A.)
Hupe, G., Foxall, T., and Ibrahim, A. (see Foxall, T.)
Huyghe, D., Lacombe, J., Duchemin, J.P., and Bonnet, M. (see Lacombe, J.)

I

Ibrahim, A., Foxall, T., and Hupe, G. (see Foxall, T.)
Iglesias, D.E., Miller, R.E., Phillips, T.G., and Knerr, R.H. (see Miller, R.E.)
Ikoma, T., Tokuda, H., and Adachi, Y. (see Tokuda, H.)
Imoto, K., Aoki, S., and Sumi, M. Novel method of diameter control in optical-fibre drawing process 726
Inada, K., Yamauchi, R., Kobayashi, T., and Arai, T. (see Yamauchi, R.)
Ingebrigtsen, K., and Ronnekleiv, A. (see Ronnekleiv, A.)
Ingram, D.G.W. Expressions for the analysis of digital transmission systems 250
Ingram, D.G.W., and Chung, K.S. (see Chung, K.S.)
Ino, M., Ishibashi, T., Makimura, T., and Ohmori, M. (see Ishibashi, T.)
Inooka, H., and Obinata, G. Mixed method of aggregation and i.s.e. criterion approaches for system reduction 88
Ip, K.T., Eastman, L.F., and Wrick, V.L. Very-high-purity InP l.p.e. layers 682
Ishaq, M., and Llanwyn Jones, D. Method of obtaining radiowave propagation parameters for the Earth-ionosphere duct at e.l.f. 254
Ishibashi, T., Ino, M., Makimura, T., and Ohmori, M. Liquid-nitrogen-cooled submillimetre-wave silicon impatt diodes 299
Ishii, K., Nishida, K., Minemura, K., and Taguchi, K. (see Nishida, K.)
Ishii, R. Design strategy for p.a.m. signal demodulator 297
Ishikawa, R., Sugimoto, S., Minemura, K., Yanase, T., and Odagiri, Y. (see Sugimoto, S.)
Itoh, K., Tatekura, K., and Matsumoto, T. (see Tatekura, K.)
Iwamura, H., Shibukawa, A., Katsui, A., and Hayashi, S. (see Shibukawa, A.)

J

Jack, M.A., and Grant, P.M. Two-dimensional transform processor for sonar beamforming using c.c.d. and s.a.w. devices 65
Jack, M.A., Park, D.G., and Grant, P.M. C.C.D. spectrum analyser using prime transform algorithm 431
Jackson, J.D., Heeks, J.S., and Adams, G.R. (see Heeks, J.S.)
Jacobs, B., De Mey, G., and Fransen, F. (see De Mey, G.)
Jacobsen, J., and Balling, P. (see Balling, P.)
James, A.H., and Pulford, T.P. (see Pulford, T.P.)
James, G.L. Radiation properties of 90° conical horns 293
James, G.L. Uniform diffraction coefficients for an impedance wedge 403
Jamieson, A.R., and Rozzi, T.E. Rigorous analysis of cross-polarisation in flange-mounted rectangular-waveguide radiators 742
Jani, B.J., and Bose, D.N. (see Bose, D.N.)
Janicki, T., Favennec, P.N., and Henry, L. (see Favennec, P.N.)
Jaussaud, P., Chartier, G.H., de Oliveira, A.D., and Parriaux, O. (see Chartier, G.H.)
Jevtic, M.M., and Tjapkin, D.A. Low-frequency multiplication noise in reference diodes for small multiplication factors 468
Johnson, D.C., Hill, K.O., Kawasaki, B.S., and Kato, D. Tunable Raman fibre-optic laser 53
Johnson, M. Diffused waveguides: mode perturbation by thin-film cladding 67

K

Kagiwada, R.S., Yen, K.H., and Wang, K.L. (see Yen, K.H.)
Kajiyama, K., Hata, S., and Mizushima, Y. (see Hata, S.)
Kanbe, H., and Kmura, T. Figure of merit for avalanche photodiodes 262
Kaneda, S., Shirota, S., and Togawa, Y. (see Shirota, S.)
Kaplan, B.Z., and Tatrash, Y. New method for generating precise triangular waves and square waves 71
Kapron, F.P. Maximum information capacity of fibre-optic waveguides 96 Errata 272
Karg, R., and Kreutzer, E. Light-controlled semiconductor waveguide antenna 246
Kataoka, S., and Hashizume, N. (see Hashizume, N.)
Kataoka, S., Hashizume, N., and Tomizawa, K. (see Hashizume, N.)
Kataoka, S., Kawashima, M., and Ohta, K. (see Kawashima, M.)
Kato, D., Johnson, D.C., Hill, K.O., and Kawasaki, B.S. (see Johnson, D.C.)
Katsui, A., Shibukawa, A., Iwamura, H., and Hayashi, S. (see Shibukawa, A.)
Kavanagh, R.J. Phase normalised m-sequences with the inphase decimation property $\{m(k)\}=\{m(2k)\}$ 222
Kawachi, M., Horiguchi, M., Kawana, A., and Miyashita, T. OH-ion distribution profiles in rod preforms of high-silica optical waveguide 247
Kawachi, M., Kawana, A., and Miyashita, T. Low-loss single-mode fibre at the material-dispersion-free wavelength of 1.27 μm 442
Kawachi, M., Kawana, A., Miyashita, T., Nakahara, M., and Hosaka, T. (see Kawana, A.)
Kawakami, S. New principle to measure loss and mode-conversion parameters of multimode fibres 706
Kawana, A., Miyashita, T., Nakahara, M., Kawachi, M., and Hosaka, T. Fabrication of low-loss single-mode fibres 188
Kawana, A., Kawachi, M., Horiguchi, M., and Miyashita, T. (see Kawachi, M.)
Kawana, A., Kawachi, M., and Miyashita, T. (see Kawachi, M.)
Kawana, A., Miyashita, T., and Horiguchi, M. (see Miyashita, T.)
Kawasaki, B.S., Johnson, D.C., Hill, K.O., and Kato, D. (see Johnson, D.C.)
Kawashima, M., Ohta, K., and Kataoka, S. Observations of high-field domains in $Ga_xIn_{1-x}Sb$ Gunn diodes 379
Kearns, W.J., Laker, K.R., and Szabo, T.L. (see Laker, K.R.)
Keen, K.M. Antenna measurements of an intermediate distance range by using an interference-pattern technique 375
Keen, K.M. Simulation of a proposed near-field-to-far-field antenna measurement system 225
Keen, K.M. V.H.F.-turnstile-antenna performance as a function of antenna geometry on large cylindrical satellites 654
Keen, N.J. Evidence for coherent noise in pumped Schottky-diode mixers 282
Kerdic, I., and Austin, B.A. (see Austin, B.A.)
Kerllenevich, B., and Coche, A. Effects of γ-irradiation on some cholesteric products 261
Khoe, G.D., and Kuyt, G. Cutting optical fibres with a hot wire 147
Kimura, T., and Asatani, K. (see Asatani, K.)
Kinase, A. Effect of skywave field strengths of proximity to a discontinuity in the earth's electrical properties 184
King, M.J., Brotherton, S.D., and Gill, A. (see Brotherton, S.D.)
Kingsley, S.A., Culshaw, B., and Davies, D.E.N. (see Culshaw, B.)
Kino, G.S., and Borden, P. (see Borden, P.)
Kino, G.S., and Tuan, H.C. (see Tuan, H.C.)
Kitano, T., and Nishikawa, K. S.A.W. right-angle reflection coefficient from metal-strip array reflector on y-cut $LiNbO_3$ 136
Kmura, T., and Kanbe, H. (see Kanbe, H.)
Knauer, K., Mader, L., Pfleiderer, M.-J., and Schlichte, M. Parallel-in/serial-out: a new approach for c.c.d. transversal filters 126 Errata 272
Knerr, R.H., Miller, R.E., Phillips, T.G., and Iglesias, D.E. (see Miller, R.E.)
Knight, P. Low-frequency behaviour of the Beverage aerial 21
Knöchel, R., and Schunemann, K. Improved cavity-stabilised oscillator circuit for single-mode operation 583
Knöchel, R., and Schunemann, K. Temperature compensation of cavity-stabilised Gunn oscillators 723
Knott, K.F. Instantaneous change in current gain produced by burst noise in a planar transistor 467

Knott, K.F. Leakage factor and burst noise in transistor arrays 523
Knox, D.M., Thirlwell, J., and Howell, R.G. (see Thirlwell, J.)
Kobayashi, K., Lang, R., and Minemura, K. (see Lang, R.)
Kobayashi, K., Odagiri, Y., and Shikada, M. (see Odagiri, Y.)
Kobayashi, K., Sugimoto, S., Minemura, K., Seki, M., Shikada, M., Ueki, A., Yanase, T., and Miki, T. (see Sugimoto, S.)
Kobayashi, T., Yamauchi, R., Arai, T., and Inada, K. (see Yamauchi, R.)
Kodera, H., Murai, F., and Kurono, H. (see Murai, F.)
Kogo, H., Yamaguchi, M., Temma, T., and Takato, K. (see Yamaguchi, M.)
Kohn, E., and Colquhoun, A. Enhancement-mode GaAs m.o.s.f.e.t. on semi-insulating substrate using a self-aligned gate technique 73 Errata 168
Kon, J., and Bosnjakovic, P. (see Bosnjakovic, P.)
Kostic, I.M. Error probabilities due to atmospheric noise in practical m-c.p.s.k. and ideal f.s.k. receivers 284
Krause, D., Baack, C., Elze, G., Walf, G., Gliemeroth, G., and Neuroth, N. (see Baack, C.)
Krause, N. Dispersion characteristics of a ferrite microstrip by a transverse-mode-matching technique Errata 120
Krause, N., and Brand, H. (see Brand, H.)
Kreutzer, E., and Karg, R. (see Karg, R.)
Krowne, C.M. Network analysis of microwave oscillators using microstrip transmission lines 115
Krumpholz, O., and Gottsmann, H. Correlation between the optical output characteristics and the time-dependent behaviour of semiconductor lasers 364
Krumpholz, O., and Eickhoff, W. (see Eickhoff, W.)
Kumar, A., and Hockham, G.A. Dielectric-ring-loaded waveguide feed 436
Kung, J.K., Malbon, R.M., and Lee, D.H. GaAs f.e.t.s. with silicon-implanted channels 187
Kuppers, D., Hazan, J.P., and Bernard, J.J. (see Hazan, J.P.)
Kuroha, T., Yoshida, K., Furui, Y., and Sentsui, S. (see Yoshida, K.)
Kurono, H., Murai, F., and Kodera, H. (see Murai, F.)
Kuyt, G., and Khoe, G.D. (see Khoe, G.D.)
Kwakernaak, A., Fieret, J., and Middelhoek, S. (see Fieret, J.)

L

Labasse, M., Henaff, Jeannine., Carel, M., and Lainey, G. (see Henaff, Jeannine.)
Lacombe, J., Duchemin, J.P., Bonnet, M., and Huyghe, D. Schottky mixer diodes made by a new method 472
Lainey, G., Henaff, Jeannine., Carel, M., and Labasse, M. (see Henaff, Jeannine.)
Laing, S.G., and Batchelor, B.G. (see Batchelor, B.G.)
Laker, K.R., Szabo, T.L., and Kearns, W.J. High-Q-factor s.a.w. resonators at 780 MHz 97
Laker, K.R., Schaumann, R., and Chalstrom. R.E. (see Schaumann, R.)
Lamb. D.R., Unter, T.F., and Roberts, P.C.T. (see Unter, T.F.)
Lamba, T.S., Faruqui, M.N., and Steele, R. Two-loop ternary adaptive delta modulation 337
Lane, J.A., and Chadha, R. (see Chadha, R.)
Lang, R., Minemura, K., and Kobayashi, K. Low-frequency intensity noise in c.w. (GaAl)As d.h. lasers with stripe geometry 228
Langmann, U., and Barabas, U. (see Barabas, U.)
Larsen, F.H. Probe correction of spherical near-field measurements 393
Launee, R. High-speed current-mode threshold gate with clamps and current comparison 99
Laval, R., Meriau, A., Castagne, R., and Laval, S. (see Meriau, A.)
Laval, S., Meriau, A., Castagne, R., and Laval, R. (see Meriau, A.)
lavedan, L.J. Design of waveguide-to-microstrip transitions specially suited to millimetre-wave applications 604
Lee, D.H., Kung, J.K., and Malbon, R.M. (see Kung, J.K.)
Lee, K.W., and Harris, D.J. (see Harris, D.J.)
Lee, P.F., Chow, Q.S., and Chow, P.E.K. Performance evaluation of a general framing circuit using two N-stage shift registers 598
Lee, T.P., Dentai, A.G., Burrus, C.A., and Buehler, E. (see Dentai, A.G.)
Lee, T.P., Muska, W.M., Li, Tingye,, and Dentai, A.G. (see Muska, W.M.)
Leminger, O.G. Stress birefringence in single-mode fibres 370
Lewis, M.F., and Browning, T.I. (see Browning, T.I.)
Li, R.C.M., and Alusow, J.A. Suppression of bulk-scattering loss at s.a.w.-resonator reflectors 580
Li, Tingye,, Muska, W.M., Lee, T.P., and Dentai, A.G. (see Muska, W.M.)
Lidgey, F.J., and Allen, P.J. Second-harmonic locking properties of l.s.a.-mode transferred-electron oscillators 260
Lind, L.F., and Nader-Esfahani, S. Design tables for a class of data-transmission filters 564
Lindley, W.T., and Burke, B.E. (see Burke, B.E.)
Lister, P.F. D.D.A notch filter 324
Liu, K.Y., Reed, I.S., and Truong, T.K. (see Reed, I.S.)
Llanwyn Jones, D., and Ishaq, M. (see Ishaq, M.)
Lopez, C., Garcia, A., and Munoz, E. Deep-level changes associated with the degradation of $GaAs_{0.6}P_{0.4}$ l.e.d.s 460
Loriou, B., and Zapata-Ferrer, J. (see Zapata-Ferrer, J.)
Louw, W.J., and Van Der Merwe, D.G. (see Van Der Merwe, D.G.)
Lubzens, D. Photoetching of InP mesas for production of mm-wave transferred-electron oscillators 171
Lynn, P.A. Feature filtering: the digital enhancement and suppression of periodic waceforms 220

M

Mabey, P.J. Addressing in radio paging 772
Maca Thomas, B., and Rayner, P.T. Effect of surface distortions on the crosspolarisation performance of paraboloidal reflectors 478
Macchesney, J.B., O'Connor, P.B., and Melliar-Smith, C.M. (see O'Connor, P.B.)
McCormick, G.C., and Hendry, A. Depolarisation by solid hydrometeors 83
McEwan, N.J. Phase of crosspolarised signals on microwave satellite links 489
McEwan, N.J., Watson, P.A., Dissanayake, A.W., Haworth, D.P., and Vakili, V.T. Crosspolarisation from high-altitude hydrometeors on a 20 GHz satellite radio path 13
McEwan, N.J., Haworth, D.P., and Watson, P.A. (see Haworth, D.P.)
McGovern, P.A. Impedance approximations for resistive conductor cable 52
MacKenzie, E.C., and Allnutt, J.E. Effect of squall-line direction on space-diversity improvement obtainable with millimetre-wave satellite radiocommunication systems 571
MacKenzie, E.C., Shutie, P.F., and Allnutt, J.E. (see Shutie, P.F.)
Mackintosh, I.W. Charge generation in trapatt diodes 231
Macksey, H.M., Blocker, T.G., and Doerbeck, F.H. GaAs power f.e.t.s. with electron-beam-defined gates 312
Macksey, H.M., Tserng, H.Q., and Sokolov, V. (see Tserng, H.Q.)
Maclean, T.S.M., Bailey, K.R.G., and Morris, G. (see Bailey, K.R.G.)
Mader, L., Knauer, K., Pfleiderer, M.-J., and Schlichte, M. (see Knauer, K.)
Maggi, W., Orlandi, G., and Salerno, M. Coaxial-cable equaliser employing active distributed RC networks 471
Mahapatra, P.R. F.S.K. bursts for efficient clutter rejection 653
Maher, B.O., and Murphy, P.J. Variation of canting-angle distribution as a function of wind velocity 567
Maione, B., and Torelli, F. New simplification criterion relating different reduction algorithms 238
Majerfeld, A., Hill, G., Robson, P.N., and Fawcett, W. (see Hill, G.)
Makimura, T., Ishibashi, T., Ino, M., and Ohmori, M. (see Ishibashi, T.)
Malbon, R.M., Kung, J.K., and Lee, D.H. (see Kung, J.K.)
Marchetti, F.E., and Reggiani, M.G. Inductive loading of the bias path in impatt-diode circuits Errata 92
Maritsas, D.G., and Arvillias, A.C. (see Arvillias, A.C.)
Marschall, P., Eickhoff, W., and Schlosser, E. (see Eickhoff, W.)
Marshall, J.E. Commutativity of time-varying systems 539
Martin, G.M., Mitonneau, A., and Mircea, A. Electrons traps in bulk and epitaxial GaAs crystals 191
Martin, G.M., Mitonneau, A., and Mircea, A. (see Mitonneau, A.)
Mason, I.M., Booer, A.K., and Chambers, J. (see Booer, A.K.)
Masuno, K., Naruse, T., and Sugawara, Y. (see Naruse, T.)
Mathews, N.A., and Ajose, S.O. (see Ajose, S.O.)
Matsumoto, T., Tatekura, K., and Itoh, K. (see Tatekura, K.)
Matsumura, H., and Gambling, W.A. (see Gambling, W.A.)
Matsumura, H., Gambling, W.A., and Payne, D.N. (see Gambling, W.A.)
Matsumura, H., Gambling, W.A., Payne, D.N., and Norman, S.R. (see Gambling, W.A.)
Matsumura, H., Gambling, W.A., and Sammut, R.A. (see Gambling, W.A.)
Matsushita, S., Mita, Y., Yanase, T., and Nomura, H. (see Mita, Y.)
Mattauch, R.J., and Fei, F.S. Local-oscillator-induced noise in GaAs Schottky mixer diodes 22
Mavor, J., Arthur, J.W., and Denyer, P.B. Analogue c.c.d. correlator using monolithic m.o.s.t. multipliers Errata 491
Mavor, J., Davie, M.C., and Denyer, P.B. Techniques for increasing the effective charge-transfer efficiency of tapped c.c.d. registers 31
Mavor, J., Arthur, J.W., and Cowan, C.F.N. (see Arthur, J.W.)
Mavor, J., Denyer, P.B., and Arthur, J.W. (see Denyer, P.B.)
Mavrokoukoulakis, N.D., Ho, K.L., and Cole, R.S. Observation of millimetre-wave amplitude scintillations in a town environment 391
Mavrokoukoulakis, N.D., Ho, K.L. and Cole, R.S. (see Ho, K.L.)
Melliar-Smith, C.M., O'Connor, P.B., and Macchesney, J.B. (see O'Connor, P.B.)
Menzel, W. Calculation of inhomogeneous microstrip lines 183
Meriau, A., Castagne, R., Laval, R., and Laval, S. Theoretical model for a microstrip optoelectronic switch 245
Meyer, W. High-sensitivity dielectric loss measurements by using super-conducting microwave resonators in an oscillator loop 07
Middelhoek, S., Fieret, J., and Kwakernaak, A. (see Fieret, J.)
Midgley, D., and Wallis, R.L. Analysis of a double helix 428
Miki, T., Sugimoto, S., Minemura, K., Kobayashi, K., Seki, M., Shikada, M., Ueki, A., and Yanase, T. (see Sugimoto, S.)
Millanta, L., Bini, M., and Rubino, N. (see Bini, M.)
Miller, E.K., Brittingham, J.N,, and Willows, J.L. Identification of e.m. spectrum by known pole sets 774
Miller, E.K., Brittingham, J.N., and Okada, J.T. (see Brittingham, J.N.)
Miller, R.E., Phillips, T.G., Iglesias, D.E., and Knerr, R.H. Noise performance of microwave GaAs f.e.t. amplifiers at low temperatures 10
Minasian, R.A. Simplified GaAs m.e.s.f.e.t. model to 10GHz 549
Minemura, K., Lang, R., and Kobayashi, K. (see Lang, R.)
Minemura, K., Nishida, K., Ishii, K., and Taguchi, K. (see Nishida, K.)
Minemura, K., Sugimoto, S., Kobayashi, K., Seki, M., Shikada, M., Ueki, A., Yanase, T., and Miki, T. (see Sugimoto, S.)
Minemura, K., Sugimoto, S., Yanase, T., Odagiri, Y., and Ishikawa, R. (see Sugimoto, S.)
Mircea, A., Martin, G.M., and Mitonneau, A. (see Martin, G.M.)
Mircea, A., Mitonneau, A., and Martin, G.M. (see Mitonneau, A.)
Mita, Y., Matsushita, S., Yanase, T., and Nomura, H. Optical absorption characteristics of hydroxyl radicals in phosphorus-containing silica glass 55
Mitonneau, A., Martin, G.M., and Mircea, A. Hole traps in bulk and epitaxial GaAs crystals 666
Mitonneau, A., Martin, G.M., and Mircea, A. (see Martin, G.M.)
Miyagi, M., and Nishida, S. Transmission characteristics of a dielectric-tube waveguide with an outer higher-index cladding 274
Miyashita, T., Horiguchi, M., and Kawana, A. Wavelength dispersion in a single-mode fibre 227
Miyashita, T., Kawachi, M., Horiguchi, M., and Kawana, A. (see Kawachi, M.)
Miyashita, T., Kawachi, M., and Kawana, A. (see Kawachi, M.)
Miyashita, T., Kawana, A., Nakahara, M., Kawachi, M., and Hosaka, T. (see Kawana, A.)
Mizushima, Y., Hata, S., and Kajiyama, K. (see Hata, S.)
Moghe, S., Borrego, J.M., Gutmann, R.J., and Chudzicki, M. (see Borrego, J.M.)
Moharir, P.S. Chinese product theorem for generalised p.n. sequences 121
Moharir, P.S. Error-detection in a d.p.s.k. system 27
Molo, F., and Ricco, B. Application of c.c.d.s. to f.d.m. channel filtering: a phase-cancellation system 704
Morgan, D.P., and Deacon, J.M. Dispersive propagation in surface-acoustic-wave pulse-compression filters 741
Morgan, D.V., Blundell, R., and Howes, M.J. (see Blundell, R.)
Morgan, D.V., Palmstrom, C.J., and Howes, M.J. (see Palmstrom, C.J.)
Morkoc, H., Bandy, S.G., Antypas, G.A., and Sankaran, R. Normally-off $Al_{0.5}Ga_{0.5}As$ heterojunction-gate GaAs f.e.t. 747

Morkoc, H., Bandy, S.G., Antypas, G.A., and Sankaran, R. Submicrometre A10.5AS heterojunction gate GaAs f.e.t. 487
Morling, R.C.S., and Cain, G.D. (see Cain, G.D.)
Morris, G., Bailey, K.R.G., and Maclean, T.S.M. (see Bailey, K.R.G.)
Moustakas, S., Hullett, J.L., and Muoi, T.V. (see Hullett, J.L.)
Mueller, E. Measurement of the effective relative permittivity of unshielded coplanar waveguides 729
Mun, J. High-efficiency and high-peak-power InP transferred-electron oscillators 275
Munoz, E., Lopez, C., and Garcia, A. (see Lopez, C.)
Munoz-Rodriguez, D., and Cattermole, K.W. New codes for digital transmission 340
Munro, D., and Chignell, R.J. (see Chignell, R.J.)
Muoi, T.V., and Hullett, J.L. (see Hullett, J.L.)
Muoi, T.V., Hullett, J.L., and Moustakas, S. (see Hullett, J.L.)
Murai, F., Kurono, H., and Kodera, H. Intentional side etching to achieve low-noise GaAs f.e.t. 316
Murgatroyd, P.N., and Button, M.R. (see Button, M.R.)
Murphy, P.J., and Maher, B.O. (see Maher, B.O.)
Murray-Shelley, R., and Arlett, P.L. New gate model for the transient analysis of logic systems 639
Muska, W.M., Li, Tingye,, Lee, T.P., and Dentai, A.G. Material-dispersion-limited operation of high-bit-rate optical-fibre data links using l.e.d.s. 605

N

Nader-Esfahani, S., and Lind, L.F. (see Lind, L.F.)
Nakahara, M., Kawana, A., Miyashita, T., Kawachi, M., and Hosaka, T. (see Kawana, A.)
Nandi, R. Grounded-capacitor bandpass filter using the operational-amplifier pole 713
Naruse, T., Sugawara, Y., and Masuno, K. Nylon-jacketed optical fibre with silicone buffer layer 153
Neizvestny, I.G., Zo Don, K., and Ovsuyk, V.N. (see Zo Don, K.)
Nelson, B.P., and Wright, J.V. (see Wright, J.V.)
Neumann, T., and Agnew, D. Tracking sensitivity: A practical algorithm 371
Neuroth, N., Baack, C., Elze, G., Walf, G., Gliemeroth, G., and Krause, D. (see Baack, C.)
Neves, J., and Watson, P.A. Propagation coefficients for vertically and horizontally polarised waves at 36.5 GHz 649
Newns, G.R., Beales, K.J., Day, C.R., and Duncan, W.J. (see Beales, K.J.)
Newsome, J.P., and Safavian, O. Development in lumped-component pulse-compression networks 205
Nicholson, B.F., Watson, B.K., and Barham, C.S. New type of constant-impedance bandpass microwave filter based on the commutating principle 535
Nicholson, H., and Woon, S.K. (see Woon, S.K.)
Nicia, A. Interference patterns from very thick samples for determining the profile of graded-index fibres 309
Nicolson, A.M. Threshold detector for subnanosecond pulses 415
Nishida, K. Avalanche-noise dependence on avalanche-photodiode structures 419
Nishida, K., Ishii, K., Minemura, K., and Taguchi, K. Double epitaxial silicon avalanche photodiodes for optical-fibre communications 280
Nishida, S., and Miyagi, M. (see Miyagi, M.)
Nishikawa, K., and Kitano, T. (see Kitano, T.)
Noguchi, A., and Yagi, T. (see Yagi, T.)
Nomura, H., Mita, Y., Matsushita, S., and Yanase, T. (see Mita, Y.)
Norman, S.R., Gambling, W.A., Payne, D.N., and Matsumura, H. (see Gambling, W.A.)
Norton, J.P. Initial convergence of recursive maximum-likelihood identification algorithms 621
Nowak, M.M., Terzian, P.A., and Fairman, R.D. K-Band f.e.t. amplifiers 159
Nowland, W.L., Olsen, R.L., and Shkarofsky, I.P. Theoretical relationship between rain depolarisation and attenuation 676
Nowland, W.L., Strickland, J.I., Schlesak, J., and Olsen, R.L. Measurements of depolarisation and attenuation at 11.7 GHz by using the communications technology satellite 750
Nussbaumer, H.J. Digital filtering using polynomial transforms 386
Nuzillat, G., Bert, G., and Arnodo, C. (see Bert, G.)

O

O'Connor, P.B., Macchesney, J.B., and Melliar-Smith, C.M. Large-core high-n.a. fibres for data-link applications 170
Obinata, G., and Inooka, H. (see Inooka, H.)
Odagiri, Y., Shikada, M., and Kobayashi, K. High-efficiency laser-to-fibre coupling circuit using a combination of a cylindrical lens and a selfoc lens 395
Odagiri, Y., Sugimoto, S., Minemura, K., Yanase, T., and Ishikawa, R. (see Sugimoto, S.)
Ohmori, M., Ishibashi, T., Ino, M., and Makimura, T. (see Ishibashi, T.)
Ohta, K., Kawashima, M., and Kataoka, S. (see Kawashima, M.)
Okada, J.T., Brittingham, J.N., and Miller, E.K. (see Brittingham, J.N.)
Okizaki, H., and Hasegawa, H. (see Hasegawa, H.)
Oliver, A.D., Parini, C.G., and Clarricoats, P.J.B. (see Parini, C.G.)
Olsen, R.L., Nowland, W.L., and Shkarofsky, I.P. (see Nowland, W.L.)
Olsen, R.L., Nowland, W.L., Strickland, J.I., and Schlesak, J. (see Nowland, W.L.)
Olver, A.D., and Tong, G. Compact antenna range at 35 GHz 223
Opielka, D. Radiation characteristics of a step discontinuity in a monomode optical fibre 319
Orlandi, G., Maggi, W., and Salerno, M. (see Maggi, W.)
Otto, O.W., and Weglein, R.D. (see Weglein, R.D.)
Ovsuyk, V.N., Zo Don, K., and Neizvestny, I.G. (see Zo Don, K.)
Owens, J.M., Wu, H.J., Smith, C.N., Jr., and Collins, J.H. (see Wu, H.J.)
Owens, J.M., Wu, H.J., Smith, C.V., Jr., and Collins, J.H. (see Wu, H.J.)
Oxley, C.H., Howard, A.M., and Purcell, J.J. X-band trapatt amplifiers 416

P

Palmstrom, C.J., Morgan, D.V., and Howes, M.J. Contact-degradation studies on GaAs transferred-electron devices using a focused backscattering technique 504
Pantell, R.H., and Chung, P.S. (see Chung, P.S.)
Panuska, V. Derivation of the recursive maximum-likelihood identification algorithm 19
Papakonstantinou, G. Synthesis of cutpoint cellular arrays with exclusive-or collector row 486
Parikh, D.D., Ahmed, N., Doldan, D.L., and Hummels, D.R. (see Ahmed, N.)
Parini, C.G., Clarricoats, P.J.B., and Oliver, A.D. Single-mode operation of low-attenuation corrugated waveguide 16
Park, D.G., Jack, M.A., and Grant, P.M. (see Jack, M.A.)
Parriaux, O., Chartier, G.H., Jaussaud, P., and de Oliveira, A.D. (see Chartier, G.H.)
Patel, P.D., Anderson, A.P., Dawoud, M.M., and Bennett, J.C. (see Anderson, A.P.)
Paterson, N.G., and Anderson, I. Bandstop iris for rectangular waveguide Errata 35
Patranabis, D., and Tripathi, M.P. Additional generalisation scheme of active RC allpass filters 167
Patranabis, D., and Roy, S.B. (see Roy, S.B.)
Patterson, E.W., Dods, A.S.M., and Hannah, J.M. Frequency-hopped waveform synthesis by using s.a.w. chirp filters 633
Payne, D.N., and Hartog, A.H. Determination of the wavelength of zero material dispersion in optical fibres by pulse-delay measurements 627
Payne, D.N., Gambling, W.A., and Matsumura, H. (see Gambling, W.A.)
Payne, D.N., Gambling, W.A., Matsumura, H., and Norman, S.R. (see Gambling, W.A.)
Payne, D.N., Sladen, F.M.E., and Adams, M.J. (see Sladen, F.M.E.)
Pearson, R.E. Novel microstrip bandstop filter 561
Pellegrini, M., Dalle Mese, E., and Giuli, D. (see Dalle Mese, E.)
Pelosi, P.M., Vandenbulcke, P., Wilkinson, C.D.W., and De La Rue, R.M. Propagation characteristics of trapezoidal-cross-section ridge optical waveguides 607
Peransin, J.M., and Groubert, E. Interdiffusion effects of heat treatment on $Ga_xIn_{1-x}Sb$ diodes metallised with gold 715
Perkins, J.K., and Cochrane, P. (see Cochrane, P.)
Petermann, K. Pulse distortion in single-mode fibres with microbending 49
Petermann, K. Uncertainties of the leaky mode correction for near-square-law optical fibres 513
Petro, J.P., and Bahr, A.J. (see Bahr, A.J.)
Pfleiderer, M.-J., Knauer, K., Mader, L., and Schlichte, M. (see Knauer, K.)
Phillips, T.G., Miller, R.E., Iglesias, D.E., and Knerr, R.H. (see Miller, R.E.)
Picciarelli, V., and Torre, M. Synthesis of filters with minimum integrated power-loss ratio in the passband 612
Pickering, C., Adams, A.R., Vinson, P.J., Pitt, G.D., and Fawcett, W. (see Adams, A.R.)
Pitt, C.W., and Walpita, L.M. Modified mode propagation in optical waveguides 347
Pitt, C.W., and Walpita, L.M. (see Walpita, L.M.)
Pitt, G.D., Adams, A.R., Vinson, P.J., Pickering, C., and Fawcett, W. (see Adams, A.R.)
Platte, W. Diffusion-controlled decay of laser-excited photoconductivity in optoelectronic switches 321
Poelman, A.J. Complex radar objects and polarisation dependence of received backscattered echoes 433
Porter, B. Static decoupling of multivariable linear systems with slow and fast modes 23
Porter, B., and D'Azzo, J.J. Transmission zeros of linear multivariable continuous-time systems 753
Porter, B., and D'Azzo, J.J. (see D'Azzo, J.J.)
Potzl, H.W., Schawarz, R., and Thim, H.W. (see Schawarz, R.)
Poulton, G.T., and Elliot, R.D. (see Elliot, R.D.)
Prabhu, K.M.M., Reddy, V.U., and Agrawal, J.P. Performance comparison of data windows 600
Prasad, K.P., and Reddy, P.S. Method for designing stable 2-d digital filters 385
Prasad, S.C., Dutta Roy, S.C., and Bhargava, D.K. (see Dutta Roy, S.C.)
Preis, D. Hilbert-transformer side-chain phase equaliser for analogue magnetic recording 616
Preis, D. Least-squares time-domain deconvolution for transversal-filter equalisers 356
Preis, D. Phase equalisation of analogue magnetic recorders by transversal filtering 127
Premoli, A., and Biey, M. (see Biey, M.)
Prew, B.A. Measurements of the close-to-carrier f.m. noise of pulsed InP t.e.o.s. primed by an external oscillator 344
Pugh, A., Waddon, K., and Heginbotham, W.B. (see Waddon, K.)
Pugh, D.R., Smither, M.A., and Woolard, L.M., Jun. (see Smither, M.A.)
Pulford, T.P., and James, A.H. Radar display system using c.c.d. for time expansion 700
Purcell, J.J., Oxley, C.H., and Howard, A.M. (see Oxley, C.H.)
Pursley, M.B., and Roefs, H.F.A. (see Roefs, H.F.A.)
Pursley, M.B., and Sarwate, D.V. (see Sarwate, D.V.)
Pykett, C.E. Orthogonal transform for estimating the number of targets in a radar resolution cell 151
Pykett, C.E., and Watkins, C.D. Radar calibration by using frequency domain measurements 514

R

Rabier, A., Benasson, A., and Harrop, P. (see Benasson, A.)
Rain, A., and Cochrane, P. (see Cochrane, P.)
Rathore, T.S. Inverse active networks 303
Rauscher, C., and Tucker, R.S. Method for measuring 3rd-order intermodulation distortion in GaAs f.e.t.s. 701
Rauscher, C., and Tucker, R.S. (see Tucker, R.S.)
Rayner, P.T., and Maca Thomas, B. (see Maca Thomas, B.)
Reddy, P.S., and Prasad, K.P. (see Prasad, K.P.)
Reddy, V.U., Prabhu, K.M.M., and Agrawal, J.P. (see Prabhu, K.M.M.)
Reed, I.S., Liu, K.Y., and Truong, T.K. Fast algorithm for computing complex number-theoretic transforms 278
Rees, H., Sanghera, G.S., and Warriner, R.A. Low temperature f.e.t. for low-power high-speed logic 156
Reggiani, M.G. Low-frequency stability of impatt-diode circuits 82
Reggiani, M.G., and Marchetti, F.E. (see Marchetti, F.E.)
Reid, G.M. Subjective data for random noise measured through the new CMTT unified weighting network for television 551
Rein, H.-M. Improving the large-signal models of bipolar transistors by dividing the intrinsic base into two lateral sections 40 Errata 168
Reinert, W., and Vowinkel, B. (see Vowinkel, B.)
Reiter, L., Hollerl, K., and Thurnbeck, J. (see Hollerl, K.)
Renelt, G. Runlength coding systems for black-and-white facsimile pictures: a comparison 573
Renelt, G., and Rothgirdt, U. (see Rothgirdt, U.)
Ricco, B., and Molo, F. (see Molo, F.)
Richards, P.J., and Anderson, A.P. (see Anderson, A.P.)
Richmond, W., Genner, R., and Braddock, P.W. (see Genner, R.)
Risk, R.J. Efficient hard-wired digital fast-fourier-transform processor 458

Rizk, M., and Davies, D.E.N. (see Davies, D.E.N.)
Rizzoli, V., Bianciardi, E., and Someda, C.G. (see Bianciardi, E.)
Roberts, J.B.G., Darlington, E.H., Edwards, R.D., and Simons, R.F. Transform coding using charge-coupled devices 277
Roberts, P.C.T., Traynar, C.P., Bloodworth, G.G., and Taylor, R.G. (see Traynar, C.P.)
Roberts, P.C.T., Unter, T.F., and Lamb. D.R. (see Unter, T.F.)
Robson, P.N., Hill, G., Majerfeld, A., and Fawcett, W. (see Hill, G.)
Roefs, H.F.A., and Pursley, M.B. Correlation parameters of random binary sequences 488
Rogers, R.R. Attenuation due to rain at low elevation angles 427
Ronnekleiv, A., and Ingebrigtsen, K. Surface-acoustic-wave beam shaping with multistrip couplers 349
Rothgirdt, U., and Renelt, G. Intermediate ternary code: A redundancy-reducing run-length code for digital facsimile transmission 749
Rotholz, E. n-way r.f. power splitters 610
Roulston, D.J., Chamberlain, S.G., and Desai, S.P. (see Chamberlain, S.G.)
Rousseau, M., and Arnaud, J. Microbending loss of multimode square-law fibres: A ray theory 265 Errata 336
Roy, S.B., and Patranabis, D. Voltage-controlled oscillator using an emitter-coupled differential pair 590
Rozzi, T.E., and Jamieson, A.R. (see Jamieson, A.R.)
Rubino, N., Bini, M., and Millanta, L. (see Bini, M.)
Rucker, C.T., Amoss, J.W., Hill, G.N., and Cox, N.W. Series-connected GaAs and Si impatt-diode chips: sone new results 331

S

Sabine, P.V.H. Refractive-index profiles of stress-induced (embossed) optical waveguides 51
Sabnis, A.G., and Chang, K. Effect of substrate temperature on d.c.-sputtered antimony-doped tin-dioxide films 113
Sadana, D.K., Fletcher, J., and Booker, G.R. Structural and electrical profiles for double damage layers in ion-implanted silicon 632
Saekeang, C., Chu, P.L., and Chow, Y.M. (see Chu, P.L.)
Safavian, O., and Newsome, J.P. (see Newsome, J.P.)
Sakai, K., Yamamoto, T., Akiba, S., and Suematsu, Y. (see Yamamoto, T.)
Salama, C.A.T., Friedman, N., Holmes, F.E., and Thompson, P.M. (see Friedman, N.)
Salerno, M., Maggi, W., and Orlandi, G. (see Maggi, W.)
Salmer, G., Crosnier, Y., Druelle, Y., and Armand, M. Negative resistance and c.w. oscillation of the transit-time transistor 100
Sammut, R.A. Discrete radiation from curved single-mode fibres 418
Sammut, R.A. Intensity modulation of light transmitted in curved optical fibres 545
Sammut, R.A., Gambling, W.A., and Matsumura, H. (see Gambling, W.A.)
Sanghera, G.S., Rees, H., and Warriner, R.A. (see Rees, H.)
Sankaran, R., Morkoc, H., Bandy, S.G., and Antypas, G.A. (see Morkoc, H.)
Santis, P. de, and Willing, H.A. (see Willing, H.A.)
Sarlat, D., Thomas, Y., and Shaw, L. (see Thomas, Y.)
Sarwate, D.V. Comments on efficient generation technique for polynomial codesets 61
Sarwate, D.V., and Pursley, M.B. New correlation identities for periodic sequences 48
Sasaki, H. Efficient intensity modulation in a Ti-diffused $LiNbO_3$ branched optical waveguide device 693
Sasaki, H., and De La Rue, R.M. Electro-optic multichannel waveguide deflector 295
Schaumann, R., Chalstrom. R.E., and Laker, K.R. Optimisation of sensitivity and dynamic range of i.f.l.f. active filters 367
Schawarz, R., Thim, H.W., and Potzl, H.W. Influence of diffusion on the small-signal properties of Misawa diodes 288
Scheggi, A.M., Checcacci, P.F., and Falciai, R. (see Checcacci, P.F.)
Schilb, D.B., and Dakss, M.L. Compensating fibre splice technique 257
Schlesak, J., Nowland, W.L., Strickland, J.I., and Olsen, R.L. (see Nowland, W.L.)
Schlichte, M., Knauer, K., Mader, L., and Pfleiderer, M.-J. (see Knauer, K.)
Schlosser, E., Eickhoff, W., and Marschall, P. (see Eickhoff, W.)
Schmidt, R.V., and Haus, H.A. (see Haus, H.A.)
Schneider, M.V., and Carlson, E.R. Notch-front diodes for millimetre-wave integrated circuits 745
Schroder, H. Television-test-signal generation by using p.a.m. pulse techniques 670
Schünemann, K., and Knochel, R. (see Knochel, R.)
Sealy, B.J., and Butcher, D.N. (see Butcher, D.N.)
Sealy, B.J., and Surridge, R.K. (see Surridge, R.K.)
Sedra, A.S., and Brown, L. (see Brown, L.)
Seikai, S., Tokuda, M., Yoshida, K., and Uchida, N. (see Tokuda, M.)
Seki, M., Sugimoto, S., Minemura, K., Kobayashi, K., Shikada, M., Ueki, A., Yanase, T., and Miki, T. (see Sugimoto, S.)
Sentsui, S., Yoshida, K., Furui, Y., and Kuroha, T. (see Yoshida, K.)
Shafai, L. Broadening, primary feed patterns,by small E-plane slots 102
Shafai, L., and Hansen, J.E. Matrix formulation of corrugated feeds by using impedance boundary conditions Errata 491
Shafai, L., and Chugh, R.K. (see Chugh, R.K.)
Shafai, L., and Hansen, J.E. (see Hansen, J.E.)
Shamash, Y. Computing the invariant zeros of multivariable systems 722
Shamash, Y. Computing the minimal polynomial by using Koenig's theorem 166
Shaw, D.W., and Williams, R.E. (see Williams, R.E.)
Shaw, L., Thomas, Y., and Sarlat, D. (see Thomas, Y.)
Shibukawa, A., Katsui, A., Iwamura, H., and Hayashi, S. Compact optical isolator for near-infrared radiation 721
Shikada, M., Odagiri, Y., and Kobayashi, K. (see Odagiri, Y.)
Shikada, M., Sugimoto, S., Minemura, K., Kobayashi, K., Seki, M., Ueki, A., Yanase, T., and Miki, T. (see Sugimoto, S.)
Shimizu, Y., and Hata, T. Unidirectional surface-acoustic-wave transducers with a ZnO film on glass substrate 384
Shinoda, Y., and Toda, K. (see Toda, K.)
Shinozaki, S. High speed I^2L gate with self-aligned double-diffusion injector 06
Shirota, S., Togawa, Y., and Kaneda, S. New type of varactor diode having strongly non-linear C/V characteristics 360
Shkarofsky, I.P., Nowland, W.L., and Olsen, R.L. (see Nowland, W.L.)
Shmat'ko, A.A., Tretikov, O.A., and Vavriv, D.M. Nonlinear theory of long-range-interaction resonant generators 480
Shutie, P.F., Allnutt, J.E., and MacKenzie, E.G. Satellite-earth signal depolarisation at 30 GHz in the absence of significant fading 01
Shutie, P.F., MacKenzie, E.C., and Allnutt, J.E. Satellite-ground signal depolarisation at millimetre wavelengths through thunderstorms 556
Simons, R.F., Roberts, J.B.G., Darlington, E.H., and Edwards, R.D. (see Roberts, J.B.G.)
Sinha, N.K., and El-Sherief, H. Controllability and observability of composite systems 409
Sladen, F.M.E., Payne, D.N., and Adams, M.J. Measurement of profile dispersion in optical fibres: a direct technique 212
Sloane, Anne E., Cullen, A.L., and Gallop, J. (see Cullen, A.L.)
Sloggett, G.J. Simple approximations for the gain margin of systems having two dominant poles 286
Smith, C.N., Jr., Wu, H.J., Collins, J.H., and Owens, J.M. (see Wu, H.J.)
Smith, C.S.A. Multifrequency tone detection by zero-interval analysis 03
Smith, C.V., Jr., Wu, H.J., Collins, J.H., and Owens, J.M. (see Wu, H.J.)
Smith, D.G. Lower bound on the size of a 3-stage wide-sense nonblocking network 215
Smith, R.J.G. Easily decodable efficient self-orthogonal block codes 173
Smither, M.A., Pugh, D.R., and Woolard, L.M., Jun. C.M.R.R. analysis of the 3-op-amp instrumentation amplifier 594
Soderstrand, M.A., and Fields, E.L. Multipliers for residue-number-arithmetic digital filters 164
Sokolov, V., Tserng, H.Q., and Macksey, H.M. (see Tserng, H.Q.)
Someda, C.G. Radiation of discrete beams from curved single-mode fibres 712
Someda, C.G., Bianciardi, E., and Rizzoli, V. (see Bianciardi, E.)
Somlo, P.I. Automated measurement of noisy voltages with a present confidence level 234
Spirito, P., Califano, F.P., Caruso, A., and Vitale, G.F. (see Califano, F.P.)
Springthorpe, A.J., Straus, J., and Szentesi, O.I. (see Straus, J.)
Stafford, E.M. Design aid for approximate p.d. and p.i.d. on/off controllers 163
Stafford, E.M. Determination of P and D parameters of on/off controllers 429
Stanislaw, O., Andrzej, C., and Stefan, F. (see Andrzej, C.)
Steel, J., and Court, R.A. Measurement of field strength for mobile services at v.h.f. and u.h.f. for the city of Melbourne 710
Steele, R., Esdale, D.J., and Goodman, D.J. Partial correction of transmission errors in d.p.c.m. without recourse to error correction coding 351
Steele, R., and Fenwick, D.M. (see Fenwick, D.M.)
Steele, R., Lamba, T.S., and Faruqui, M.N. (see Lamba, T.S.)
Stefan, F., Andrzej, C., and Stanislaw, O. (see Andrzej, C.)
Stephenson, F.W., and Dunning-Davies, J. Comments on active RC realisation of a 3rd-order bandpass Butterworth characteristics using equal-valued passive elements 34
Stephenson, I.M., Akello, R.J., and Easter, B. (see Akello, R.J.)
Stevenson, A. Method of obtaining accurate transistor data for the evaluation of computer models 436
Stockton, J.R. New form of digital wattmeter using a double-dual-slope principle 406
Stonham, T.J. Improved Hamming-distance analysis for digital learning networks 155
Straus, J., Springthorpe, A.J., and Szentesi, O.I. Phase-shift modulation technique for the linearisation of analogue optical transmitters 149
Straus, J., and Szentesi, O.I. Linearisation of optical transmitters by a quasifeedforward compensation technique 158
Strickland, J.I., Nowland, W.L., Schlesak, J., and Olsen, R.L. (see Nowland, W.L.)
Stuart, R.A., Baglee, D.A., Gill, R., and Eccleston, W. (see Baglee, D.A.)
Stumper, U. Tunable Y-type waveguide power divider as standard mismatch Errata 591
Suematsu, Y., Yamamoto, T., Sakai, K., and Akiba, S. (see Yamamoto, T.)
Sugawara, Y., Naruse, T., and Masuno, K. (see Naruse, T.)
Sugimoto, S., Minemura, K., Kobayashi, K., Seki, M., Shikada, M., Ueki, A., Yanase, T., and Miki, T. High-speed digital-signal transmission experiments by optical wavelength-division multiplexing 680
Sugimoto, S., Minemura, K., Yanase, T., Odagiri, Y., and Ishikawa, R. 100 Mb/s 12 km and 400 Mb/s 8 km optical-fibre transmission experiments 635
Sumi, M., Imoto, K., and Aoki, S. (see Imoto, K.)
Sundberg, C.-E. Asymptotically optimal soft decision decoding algorithms for Hamming codes 38
Surridge, R.K., and Sealy, B.J. Active layers for device applications by using high-energy selenium implantation into GaAs 233
Sutcliffe, H., and Ulgen, Y. Spectra of a.c.-induced noise in resistors 397
Suzuki, N. New 1024-element charge-coupled linear image sensor with high sensitivity 716
Szabo, T.L., Laker, K.R., and Kearns, W.J. (see Laker, K.R.)
Szajnowski, W.J. Suboptimum quantiser/coder for a receiver with ternary integration 658
Szanjowski, W.J. Estimating the correlation coefficient of highly correlated clutter Errata 491
Szentesi, O.I., and Straus, J. (see Straus, J.)
Szentesi, O.I., Straus, J., and Springthorpe, A.J. (see Straus, J.)
Szentkuti, B.T. Simple analysis of anisotropic microstrip lines by a transform method Errata 92
Szulakiewicz, P., and Grzegorek, Z. (see Grzegorek, Z.)

T

Taguchi, K., Nishida, K., Ishii, K., and Minemura, K. (see Nishida, K.)
Takada, T., Yagasaki, T., and Horayama, M. GaAs Schottky-barrier-diode frequency multipliers in 300 and 450 GHz bands 699
Takato, K., Yamaguchi, M., Temma, T., and Kogo, H. (see Yamaguchi, M.)
Tarokh, M. Necessary conditions for stabilisation and pole placement with output feedback 148
Tatekura, K., Itoh, K., and Matsumoto, T. Power loss caused by random mode coupling in a multimode optical fibre 767
Tatrash, Y., and Kaplan, B.Z. (see Kaplan, B.Z.)
Tattersal, R.L.O., and Cartwright, N.E. (see Cartwright, N.E.)
Tattersall, R.L.O., and Turner, D.J.W. (see Turner, D.J.W.)
Taylor, D.P., and Ekanayake, M. (see Ekanayake, M.)
Taylor, H.F., Chang, C.T., and Cassaboom, J.A. (see Chang, C.T.)
Taylor, R.G., Traynar, C.P., Roberts, P.C.T., and Bloodworth, G.G. (see Traynar, C.P.)
Tell, R., Torphammar, P., and Eng, S.T. Multiplexer at 5 Gbit/s for fibre-optical communication systems 765
Temma, T., Yamaguchi, M., Takato, K., and Kogo, H. (see Yamaguchi, M.)
Tenchio, G. 1/f noise of continuous-wave semiconductor lasers 614
Terzian, P.A., Nowak, M.M., and Fairman, R.D. (see Nowak, M.M.)
Thayse, A. Static-hazard detection in switching circuits by prime-implicant examination in fuzzy functions 94

Thim, H.W., Schawarz, R., and Potzl, H.W. (see Schawarz, R.)
Thirlwell, J., Knox, D.M., and Howell, R.G. Crosspolar variations on a satellite-earth path 516
Thirlwell, J., Howell, R.G., and Golfin, N.G. (see Howell, R.G.)
Thomas, G. Design of a root-locus plotter 410
Thomas, R.R., and Craven, G. (see Craven, G.)
Thomas, Y., Sarlat, D., and Shaw, L. Receding-horizon approach to the synthesis of nonlinear multivariable regulators 329
Thompson, P.M., Friedman, N., Salama, C.A.T., and Holmes, F.E. (see Friedman, N.)
Thomson, W.E. Distortionless vestigal-sideband transmission with symmetric delay about the carrier frequency and synchronous demodulation 58
Thowsen, A. Effects of delay and uncertainty of control-system performance 724
Thurnbeck, J., Hollerl, K., and Reiter, L. (see Hollerl, K.)
Timmermann, C.C. Transverse light coupling from GaAs laser into optical fibres 766
Tjapkin, D.A., and Jevtic, M.M. (see Jevtic, M.M.)
Toda, K., and Shinoda, Y. Unidirectional transducer for Lamb-wave delay lines 363
Togawa, Y., Shirota, S., and Kaneda, S. (see Shirota, S.)
Tokuda, H., Adachi, Y., and Ikoma, T. Microwave capability of 1.5 μm-gate GaAs m.o.s.f.e.t. 761
Tokuda, M., Seikai, S., Yoshida, K., and Uchida, N. Measurement of baseband frequency response of multimode fibre by using a new type of mode scrambler 146
Tomizawa, K., Hashizume, N., and Kataoka, S. (see Hashizume, N.)
Tomlinson, G.H., and Galvin, P. Peak values of system response to a pseudorandom input 392
Tomlinson, G.H., and Unsworth, L. Design of an active distributed RC lowpass network 575
Tong, G., and Olver, A.D. (see Olver, A.D.)
Torelli, F., and Maione, B. (see Maione, B.)
Torphammar, P., Tell, R., and Eng, S.T. (see Tell, R.)
Torre, M., and Picciarelli, V. (see Picciarelli, V.)
Traynar, C.P., Roberts, P.C.T., Bloodworth, G.G., and Taylor, R.G. Novel c.c.d. signal integrator 456
Tretikov, O.A., Shmat'ko, A.A., and Vavriv, D.M. (see Shmat'ko, A.A.)
Trew, R.J. Octave-band GaAs f.e.t. y.i.g.-tuned oscillators 629
Tripathi, M.P., and Patranabis, D. (see Patranabis, D.)
Truong, T.K., Reed, I.S., and Liu, K.Y. (see Reed, I.S.)
Tserng, H.Q., Macksey, H.M., and Sokolov, V. Performance of GaAs m.e.s.f.e.t. oscillators in the frequency range 8-25 GHz 85
Tsironis, C., and Beneking, H. Avalanche noise in GaAs m.e.s.f.e.t.s. 438
Tsividis, Y.P. Technique for increasing the gain-bandwidth product of n-m.o.s. and p-m.o.s. integrated inverters Errata 591
Tuan, H.C., and Kino, G.S. Large-time-bandwidth-product correlation and holographic storage with an s.a.w. storage correlator 709
Tucker, R.S., and Rauscher, C. Modelling the 3rd-order intermodulation-distortion properties of a GaAs f.e.t. 508
Tucker, R.S., and Rauscher, C. (see Rauscher, C.)
Tucker, W.H., and Bates, R.H.T. Efficient pitch estimation for speech and music 357
Turner, D.J.W., and Tattersall, R.L.O. Analysis of fading due to rain, snow and multigraph propagation for 11 GHz radio links variously located in England 619
Tynes, A.R., and Derosier, R.M. Low-loss splices for single-mode fibres 673

U

Uchida, N., and Hirai, M. (see Hirai, M.)
Uchida, N., Tokuda, M., Seikai, S., and Yoshida, K. (see Tokuda, M.)
Ueki, A., Sugimoto, S., Minemura, K., Kobayashi, K., Seki, M., Shikada, M., Yanase, T., and Miki, T. (see Sugimoto, S.)
Uematsu, Y., Yamamoto, M., and Unno, Y. Grating-coupled GaAs-GaAlAs lasers with distributed Bragg reflectors 759
Ulgen, Y., and Sutcliffe, H. (see Sutcliffe, H.)
Unno, Y., Uematsu, Y., and Yamamoto, M. (see Uematsu, Y.)
Unsworth, L., and Tomlinson, G.H. (see Tomlinson, G.H.)
Unter, T.F., Roberts, P.C.T., and Lamb. D.R. Correlation of pulsed m.o.s. capacitor measurements with oxidation induced defects 93

V

Vakili, V.T., McEwan, N.J., Watson, P.A., Dissanayake, A.W., and Haworth, D.P. (see McEwan, N.J.)
Van de Voorde, H., and Willems, J. (see Willems, J.)
Van Der Merwe, D.G., and Louw, W.J. Regenerative transistor power switch 474
Van Iperen, B.B., and Goedbloed, J.J. Intrinsic response time and related quantities describing semiconductor avalanches 448
Vandenbulcke, P., Pelosi, P.M., Wilkinson, C.D.W., and De La Rue, R.M. (see Pelosi, P.M.)
Vasile, C.F. Two-port description of an s.a.w. filter 326
Vavriv, D.M., Shmat'ko, A.A., and Tretikov, O.A. (see Shmat'ko, A.A.)
Venema, A., and Humphreys, R.F. Inclusion of conductivity in silicon s.a.w. component design 594
Venema, A., Humphryes, R.F., and Dekkers, J.J.M. Calculations of $\Delta v/v$ for thin-film s.a.w. transducers on a nonzero conductive silicon substrate 647
Vinson, P.J., Adams, A.R., Pickering, C., Pitt, G.D., and Fawcett, W. (see Adams, A.R.)
Vitale, G.F., Califano, F.P., Caruso, A., and Spirito, P. (see Califano, F.P.)
Volluet, G. Surface acoustic-wave oscillator tuned by magneto-elastic effect 588
Vora, C., and Gajski, D.D. (see Gajski, D.D.)
Vowinkel, B. High-order mode coupler for millimetre wavelengths 553
Vowinkel, B., and Reinert, W. Millimetre-wave s.s.b. mixer with integrated local-oscillator injection 226
Vyas, H.P., Gutmann, R.J., and Borrego, J.M. Leakage current enhancement in impatt oscillators by photoexcitation 189

W

Waddon, K., Pugh, A., and Heginbotham, W.B. Visually interactive method to determine the transportation speed of component parts 86
Wait, J.R. Comments on low-frequency behaviour of the Beverage aerial 272
Walf, G., Baack, C., and Elze, G. (see Baack, C.)
Walf, G., Baack, C., Elze, G., Gliemeroth, G., Krause, D., and Neuroth, N. (see Baack, C.)
Walker, E.L. Compensation technique for the design of widebane surface-acoustic-wave filters using multistrip couplers 413
Wallis, R.L., and Midgley, D. (see Midgley, D.)
Walpita, L.M., and Pitt, C.W. Measurement of Langmuir-film properties by optical waveguide probe 210
Walpita, L.M., and Pitt, C.W. (see Pitt, C.W.)
Walsh, J. Solution of currents on linear antennas: eigenfunctions and resonance 17
Wang, K.L., Coldren, L.A., and Haus, H.A. (see Coldren, L.A.)
Wang, K.L., Yen, K.H., and Kagiwada, R.S. (see Yen, K.H.)
Warriner, R.A., Rees, H., and Sanghera, G.S. (see Rees, H.)
Watkins, C.D., and Pykett, C.E. (see Pykett, C.E.)
Watson, B.K., Nicholson, B.F., and Barham, C.S. (see Nicholson, B.F.)
Watson, P.A., and Dissanayake, A.W. Calculation of forward scatter and crosspolarisation from ice spheroids 555
Watson, P.A., and Dissanayake, A.W. (see Dissanayake, A.W.)
Watson, P.A., Haworth, D.P., and McEwan, N.J. (see Haworth, D.P.)
Watson, P.A., McEwan, N.J., Dissanayake, A.W., Haworth, D.P., and Vakili, V.T. (see McEwan, N.J.)
Watson, P.A., and Neves, J. (see Neves, J.)
Weeks, R. Delay equalisation of vesitgial-sideband waveform transmission systems 291
Weglein, R.D., and Otto, O.W. Effect of vibration on s.a.w.-oscillator noise spectra 103
Errata 272
Wellens, U. High-bit-rate pulse regeneration and injection laser modulation using a diode circuit 529
White, B.R., Berry, R.W., and Hooper, R.C. (see Berry, R.W.)
Whitehead, D.G. Algorithms for logic-circuit synthesis by using multiplexers 355
Wickramasinghe, H.K., and Heiserman, J. Image enhancement in the scanning acoustic microscope using analogue filters 776
Wight, D.R., Blenkinsop, I.D., and Harding, W.R. (see Blenkinsop, I.D.)
Wilkinson, C.D.W., Pelosi, P.M., Vandenbulcke, P., and De La Rue, R.M. (see Pelosi, P.M.)
Willems, J., and Van de Voorde, H. Inverse optimal control problem for linear discrete-time systems 493
Williams, R.E., and Shaw, D.W. GaAs f.e.t.s. with graded channel doping profiles 408
Willing, H.A., and Santis, P. de Modelling of Gunn-domain effects in GaAs m.e.s.f.e.t.s. 537
Willows, J.L., Miller, E.K., and Brittingham, J.N. (see Miller, E.K.)
Wilson, G. RC active variable-group-delay equaliser 424
Woodman, K.F. Dielectric-clad discone 264
Woolard, L.M., Jun., Smither, M.A., and Pugh, D.R. (see Smither, M.A.)
Woon, S.K., and Nicholson, H. Describing functions, limit cycles and reduced models in nonlinear systems 185
Wrick, V.L., Ip, K.T., and Eastman, L.F. (see Ip, K.T.)
Wright, J.V., and Nelson, B.P. Pulse compression in optical fibres 361
Wu, H.J., Smith, C.N., Jr., Collins, J.H., and Owens, J.M. Bandpass filtering with multibar magnetostatic-surface-wave microstrip transducers 610
Wu, H.J., Smith, C.V., Jr., Collins, J.H., and Owens, J.M. Bandpass filtering with multibar magnetostatic-surface-wave microstrip transducers 610

Y

Yagasaki, T., Takada, T., and Horayama, M. (see Takada, T.)
Yagi, T., and Noguchi, A. Gyromagnetic nonlinear element and its application as a pulse-shaping transmission line 683
Yamaguchi, M., Temma, T., Takato, K., and Kogo, H. Frequency response of a surface-acoustic-wave filter using a waveguide 204
Yamamoto, M., Uematsu, Y., and Unno, Y. (see Uematsu, Y.)
Yamamoto, T., Sakai, K., Akiba, S., and Suematsu, Y. Fast pulse behaviour of InGaAsP/InP double-heterostructure lasers emitting at 1.27 μm 143
Yamauchi, R., Kobayashi, T., Arai, T., and Inada, K. Coloration and its reduction in phosphorus-doped low-loss optical fibres 461
Yanase, T., Mita, Y., Matsushita, S., and Nomura, H. (see Mita, Y.)
Yanase, T., Sugimoto, S., Minemura, K., Kobayashi, K., Seki, M., Shikada, M., Ueki, A., and Miki, T. (see Sugimoto, S.)
Yanase, T., Sugimoto, S., Minemura, K., Odagiri, Y., and Ishikawa, R. (see Sugimoto, S.)
Yen, K.H., Wang, K.L., and Kagiwada, R.S. Efficient bulk wave excitation on ST quartz 37
Yoshida, K., Furui, Y., Sentsui, S., and Kuroha, T. Low-loss fibre prepared under high deposition rate by modified c.v.d. technique 608
Yoshida, K., Tokuda, M., Seikai, S., and Uchida, N. (see Tokuda, M.)
Yu, C., Haw, M.F., and Hsu, H. Correlation between stimulated scattering processes and laser-induced damage in crystalline quartz 240
Yu, K. High-level injection in the epilayer of the I^2L transistor 202
Yu, S-Y. New v-groove integrated injection logic 382

Z

Zakarevicius, R.A. Signal processing with fast chirp waveforms 296
Zakarevicius, R.A., Gurst, G.C., and Holmes, W.H. (see Gurst, G.C.)
Zapata-Ferrer, J., and Loriou, B. Modelling of microwave GaAs f.e.t. in common-gate operation 106
Zissos, D., and Duncan, F.G. Microprocessor interfaces Errata 35
Zo Don, K., Neizvestny, I.G., and Ovsuyk, V.N. Effect of the reverse bias between channel and substrate on the effective mobility of electrons in a Ge i.g.f.e.t. 624

Subject index

ñ

100 Mb/s 12 km and 400 Mb/s 8 km optical-fibre transmission experiments. S.Sugimoto, K.Minemura, T.Yanase, Y.Odagiri and R.Ishikawa 635
1/f noise of continuous-wave semiconductor lasers. G.Tenchio 614

h

2-d digital filters, method for designing stable. K.P.Prasad and P.S.Reddy 385

I

3-level conduction-band structure of GaAs from high-stress and high-field measurements. A.R.Adams, P.J.Vinson, C.Pickering, G.D.Pitt and W.Fawcett 46

4-phase p.s.k. differential demodulator using a.s.w. delay lines. Jeannine.Henaff, M.Carel, G.Lainey and M.Labasse 586

A

A.S.W. delay lines, 4-phase p.s.k. differential demodulator using. Jeannine.Henaff, M.Carel, G.Lainey and M.Labasse 586
A.S.W. storage correlator, input correlation with the. P.Borden and G.S.Kino 470
Accurate broadband square-to-triangle convertor. S.F.Carter and E.A.Faulkner 381
Acoustic-bulk-wave resonators and filters operating in the fundamental mode at frequencies greater than 100 MHz. M.Berte 248
Acoustic microscope, scanning, image enhancement in the, using analogue filters. H.K.Wickramasinghe and J.Heiserman 776
Acoustic sensitivity of optical-fibre waveguides. B.Culshaw, D.E.N.Davies and S.A.Kingsley 760
Acoustic-surface-wave zero-temperature cuts in Tl_3TaSe_4, new. J.Henaff and M.Feldmann 661
Acoustic-wave,-bulk, devices employing interdigital transducers, new family of. T.I.Browning and M.F.Lewis 128
Active broadbanding of an X-band impatt-diode amplifier. A.S.Bains and C.S.Aitchison 289
Active filter, simple electronically tunable 2nd-order. J.B.Grimbleby 258
Active filters, i.f.l.f., optimisation of sensitivity and dynamic range of. R.Schaumann, Chalstrom. R.E. and K.R.Laker 367
Active, inverse, networks. T.S.Rathore 303
Active layers for device applications by using high-energy selenium implantation into GaAs. R.K.Surridge and B.J.Sealy 233
Active RC realisation, equal-valued grounded-capacitor, of all-pole transfer functions. S.C.Dutta Roy, S.C.Prasad and D.K.Bhargava 566
Active RC realisation of a 3rd-order bandpass Butterworth characteristic using equal-valued passive elements, comments on. F.W.Stephenson and J.Dunning-Davies 34
Active variable-group-delay equaliser, RC. G.Wilson 424
Adaptive filtering, sequential regression considerations of. N.Ahmed, D.L.Doldan, D.R.Hummels and D.D.Parikh 446
Adaptively designed test logic for digital circuits. I.Aleksander and Z.Al-Bandar 466
Adder, 8 bit binary, Gunn-effect high-speed carry finding device for. N.Hashizume, S.Kataoka and K.Tomizawa 637
Adder, full, multivalued integrated-injection-logic (MI^2L). N.Friedman, C.A.T.Salama, F.E.Holmes and P.M.Thompson 135
Additional generalisation scheme of active RC all-pass filters. D.Patranabis and M.P.Tripathi 167
Addressing in radio paging. P.J.Mabey 772
Aerial, Beverage, low-frequency behaviour of the. P.Knight 21
Aerial, Beverage, low-frequency behaviour of the. J.R.Wait 272
Algebra, ternary, synthesis of some partially symmetric boolean functions by. M.Davio and J.-P.Deschamps 473
Algorithm for the synthesis of state-feedback regulators by entire eigenstructure assignment. J.J.D'Azzo and B.Porter 230
Algorithm, recursive maximum-likelihood identification, derivation of the. V.Panuska 19
Algorithms for logic-circuit synthesis by using multiplexers. D.G.Whitehead 355
Algorithms, reduction, new simplification criterion relating different. B.Maione and F.Torelli 238
Amann, M.-C.. W.Harth 291
Amorphous-semiconductor switches, microwave modulation by. D.N.Bose and B.J.Jani 451
Amp, 3-op-, instrumentation amplifier, C.M.R.R. analysis of the. M.A.Smither, D.R.Pugh and L.M.Woolard,Jun. 594
Amplifier, GaAs-m.e.s.f.e.t., gain performance, effects of microstrip discontinuities. R.J.Akello, B.Easter and I.M.Stephenson 160
Amplifier, impatt-diode, active broadbanding of an X-band. A.S.Bains and C.S.Aitchison 289
Amplifiers, f.e.t., K-Band. M.M.Nowak, P.A.Terzian and R.D.Fairman 159
Amplifiers, impatt, high-power pulsed and c.w. silicon double-drift, at X-band. P.W.Braddock and R.D.Hodges 176
Amplifiers, microwave GaAs f.e.t., noise performance of, at low temperatures. R.E.Miller, T.G.Phillips, D.E.Iglesias and R.H.Knerr 10
Amplifiers, X-band trapatt. C.H.Oxley, A.M.Howard and J.J.Purcell 416
Analogue c.c.d. correlator using monolithic m.o.s.t. multipliers. J.Mavor, J.W.Arthur and P.B.Denyer Errata 491
Analyser, spectrum, C.C.D., using prime transform algorithm. M.A.Jack, D.G.Park and P.M.Grant 431
Analysis of a double helix. D.Midgley and R.L.Wallis 428
Analysis of fading due to rain, snow and multigraph propagation for 11 GHz radio links variously located in England. D.J.W.Turner and R.L.O.Tattersall 619
Anodic oxidation, new, stable charge storage of m.a.o.s. diodes on GaAs by. B.Bayraktaroglu, S.J.Hannah and H.L.Hartnagel 45
Antenna, effective area of an (Comments on). R.M.Bevensee 336
Antenna geometry, V.H.F.-turnstile-antenna performance as a function of, on large cylindrical satellites. K.M.Keen 654
Antenna, light-controlled semiconductor waveguide. R.Karg and E.Kreutzer 246
Antenna measurement system, simulation of a proposed near-field-to-far-field. K.M.Keen 225
Antenna measurements of an intermediate distance range by using an interference-pattern technique. K.M.Keen 375
Antenna range, compact, at 35 GHz. A.D.Olver and G.Tong 223
Antenna switches, waveguide, using p-i-n diodes. G.Craven and R.R.Thomas 518
Antenna,-turnstile-, V.H.F., performance as a function of antenna geometry on large cylindrical satellites. K.M.Keen 654
Antennas, accurately modelling, bivariate interpolation approach for efficiently and, near a halfspace. J.N.Brittingham, E.K.Miller and J.T.Okada 690
Antennas, high-efficiency, design of, employing dielectric-cone feeds. R.K.Chugh and L.Shafai 169
Antennas, large reflector, necessary criteria for the diagnosis of panel misalignments in, by microwave metrology. J.C.Bennett and M.P.Godwin 463
Antennas:, linear, solution of currents on, eigenfunctions and resonance. J.Walsh 17
Antennas, reflector, diffraction-optimised shaped-beam. R.D.Elliot and G.T.Poulton Errata 491
Application of c.c.d.s. to f.d.m. channel filtering: a phase-cancellation system. F.Molo and B.Ricco 704
Array, efficient superdirective, search procedure for, and image enhancement functions. A.P.Anderson, M.M.Dawoud, J.C.Bennett and P.D.Patel 43 Errata 168
Array, modified programmable logic, with more product terms. L.A.M.Bennett 443
Array of flat symmetrical dipoles operating at the first antiresonance frequency. G.Dubost 672
Array reflector, metal strip, s.a.w. right-angle reflection coefficient from, on y-cut $LiNbO_3$. T.Kitano and K.Nishikawa 136
Arrays, circular, electronic steering of multiple nulls for. D.E.N.Davies and M.Rizk 669
Arrays, cutpoint cellular, synthesis of, with exclusive-or collector row. G.Papakonstantinou 486
Arrays, linear, null steering in, by using amplitude control of signals in the feeder network. D.S.Hicks 198
Arrays, r.a.m./r.o.m., pattern-recognition properties of. M.Dobree Wilson and I.Aleksander 253
Asymmetric 2-Josephson-junction interferometer as a logic gate. H.Beha 218
Asymptotically optimal soft decision decoding algorithms for Hamming codes. C.-E.Sundberg 38
Atmospheric noise, error probabilities due to, in practical m-c.p.s.k. and ideal f.s.k. receivers. I.M.Kostic 284
Attenuation, differential mode, novel technique for the measurement of, in graded-index fibres. M.Eve 744
Attenuation due to rain at low elevation angles. R.R.Rogers 427
Attenuation, measurements of depolarisation and, at 11.7 GHz by using the communications technology staellite. W.L.Nowland, J.I.Strickland, J.Schlesak and R.L.Olsen 750
Attenuation measurements, simultaneous 20 and 30 GHz, on a satellite-earth path. R.G.Howell, J.Thirlwell and N.G.Golfin 640
Autocorrelation receiver, decision-directed reference carrier generation in an. K.H.Annecke 267
Automated measurement of noisy voltages with a present confidence level. P.I.Somlo 234
Avalanche-noise dependence on avalanche-photodiode structures. K.Nishida 419
Avalanche noise in GaAs m.e.s.f.e.t.s.. C.Tsironis and H.Beneking 438
Avalanche photodiode, differential pulse regenerator driven by 1 Gbit/s p.c.m.-type signals from an. U.Barabas 536
Avalanche photodiode, performance of p-i-n photodiode compared with, in the longer-wavelength region of 1 to 2 μm. S.Hata, K.Kajiyama and Y.Mizushima 668
Avalanche photodiodes, figure of merit for. H.Kanbe and T.Kmura 262

B

Backscattered echoes, received, complex radar objects and polarisation dependence of. A.J.Poelman 433
Backscattering technique, focused, contact-degradation studies on GaAs transferred-electron devices using a. C.J.Palmstrom, D.V.Morgan and M.J.Howes 504
Balun, broadband microstrip, optimum design for a. D.M.L.Bartholomew 510
Bandpass Butterworth characteristic, 3rd-order, active RC realisation of a, using equal-valued passive elements, comments on. F.W.Stephenson and J.Dunning-Davies 34
Bandpass filter, grounded-capacitor, using the operational-amplifier pole. R.Nandi 713
Bandpass filter, tunable millimetre-wave ferrite, with reduced biasing field. H.Brand and N.Krause 576
Bandpass filtering with multibar magnetostatic-surface-wave microstrip transducers. H.J.Wu, C.N.Smith,Jr., J.H.Collins and J.M.Owens 610
Bandstop iris for rectangular waveguide. N.G.Paterson and I.Anderson Errata 35
Binary sequences, correlation parameters of random. H.F.A.Roefs and M.B.Pursley 488
Bipolar-transistor circuits, d.c. solution of. A.A.Abdallah 396
Bipolar transistors, improving the large-signal models of, by dividing the intrinsic base into two lateral sections. H.-M.Rein 40 Errata 168
Bivariate interpolation approach for efficiently and accurately modelling antennas near a half-space. J.N.Brittingham, E.K.Miller and J.T.Okada 690
Boolean functions, partially symmetric. synthesis of some, by ternary algebra. M.Davio and J.-P.Deschamps 473
Broadening, primary feed patterns,by small E-plane slots. L.Shafai 102

C

C.C.D.-addressed liquid-crystal displays. S.D.Brotherton, A.Gill and M.J.King 270
C.C.D., analogue, novel linear regression analyser using. J.W.Arthur, C.F.N.Cowan and J.Mavor 751
C.C.D. and s.a.w. devices, two-dimensional transform processor for sonar beamforming using. M.A.Jack and P.M.Grant 65
C.C.D. correlator, analogue, using monolithic m.o.s.t. multipliers. J.Mavor, J.W.Arthur and P.B.Denyer Errata 491
C.C.D. delay line, spectrum analysis with a. J.S.Heeks, J.D.Jackson and G.R.Adams 738
C.C.D., intracell, programmable correlator. N.E.Evans and H.S.Gamble 69
C.C.D. processor for simultaneous time stretching and signal averaging. G.D.Cain and R.C.S.Morling 269
C.C.D. programmable transversal filter, new. B.E.Burke and W.T.Lindley 521
C.C.D., radar display system using, for time expansion. T.P.Pulford and A.H.James 700
C.C.D. registers, tapped, techniques for increasing the effective charge-transfer efficiency of. J.Mavor, M.C.Davie and P.B.Denyer 31

C.C.D.S. to f.d.m. channel filtering, application of,: a phase-cancellation system. F.Molo and B.Ricco 704
C.C.D. signal integrator, novel. C.P.Traynar, P.C.T.Roberts, G.G.Bloodworth and R.G.Taylor 456
C.C.D. spectrum analyser using prime transform algorithm. M.A.Jack, D.G.Park and P.M.Grant 431
C.C.D. transversal filter, a new approach for, parallel-in/ serial-out. K.Knauer, L.Mader, M.-J.Pfleiderer and M.Schlichte 126
Errata 272
C.C.D. transversal filter, programmable analogue, monolithic. P.B.Denyer, J.W.Arthur and J.Mavor 739
C.M.R.R. analysis of the 3-op-amp instrumentation amplifier. M.A.Smither, D.R.Pugh and L.M.Woolard,Jun. 594
C.V.D. technique, modified, low-loss fibre prepared under high deposition rate by. K.Yoshida, Y.Furui, S.Sentsui and T.Kuroha 608
Calculation of external circuit current of thin-film semiconductor structures. A.A.Barybin 239
Calculation of forward scatter and crosspolarisation from ice spheroids. P.A.Watson and A.W.Dissanayake 555
Calculation of inhomogeneous microstrip lines. W.Menzel 183
Calculation of wideband random-noise powers in television systems. J.M.Corbett 530
Calculations of $\Delta v/v$ for thin-film s.a.w. transducers on a nonzero conductive silicon substrate. A.Venema, R.F.Humphryes and J.J.M.Dekkers 647
Calibration of 20 and 30 GHz radiometers by using the ATS-6 satellite beacons. R.R.Bell 412
Calibration, radar, by using frequency domain measurements. C.E.Pykett and C.D.Watkins 514
Capacitor measurements, pulsed m.o.s., correlation of, with oxidation induced defects. T.F.Unter, P.C.T.Roberts and Lamb. D.R. 93
Carrier frequency, with symmetric delay about the, distortionless vestigal-sideband transmission, and synchronous demodulation. W.E.Thomson 58
Cascaded s.a.w. gratings as passband filters. H.A.Haus and R.V.Schmidt 445
Cathode, arc, root, energy balance at, on copper with oxide films above 25 nm thickness. A.H.Hitchcock and A.E.Guile 172
Cavity-stabilised oscillator, improved, circuit for single-mode operation. R.Knochel and K.Schunemann 583
Cellular, cutpoint, arrays, synthesis of, with exclusive-or collector row. G.Papakonstantinou 486
Change of some properties of junction field-effect transistors after ionising irradiation. G.Dehmel and D.Braunig 601
Charge-coupled devices, interference-rejection filter using. J.Carver and G.S.Hobson 732
Charge-coupled devices, transform coding using. J.B.G.Roberts, E.H.Darlington, R.D.Edwards and R.F.Simons 277
Charge-coupled linear image sensor, new 1024-element, with high sensitivity. N.Suzuki 716
Charge generation in trapatt diodes. I.W.Mackintosh 231
Chinese product theorem for generalised p.n. sequences. P.S.Moharir 121
Chirp, fast, waveforms, signal processing with. R.A.Zakarevicius 296
Cholesteric products, effects of γ-irradiation on some. B.Kerllenevich and A.Coche 261
Circuit, new phase-sensitive rectifier. S.F.Carter and E.A.Faulkner 439
Circuits for the precise synthesis of the sine function. B.Gilbert 506
Cladding, outer higher-index, transmission characteristics of a, dielectric-tube waveguide with an. M.Miyagi and S.Nishida 274
Clutter, highly correlated, estimating the correlation coefficient of. W.J.Szanjowski
Errata 491
Clutter rejection, efficient, F.S.K. bursts for. P.R.Mahapatra 653
Coaxial-cable equaliser employing active distributed RC networks. W.Maggi, G.Orlandi and M.Salerno 471
Coaxial cables:, installed 1.2/4.4mm, through-pulse measurements on, two examples. P.Cochrane and A.Rain 307
Coaxial cables, nonlinear effects in, at microwave frequencies. M.B.Amin and F.A.Benson 768
Coaxial cables, pulse echo return loss testing of telecommunication, wideband equalisation and signal averaging applied to the. P.Cochrane and J.K.Perkins 481
Coaxial cables, through pulse measurement technique for assessing the forward echo performance of. P.Cochrane 02
Coaxial-to-microstrip, equivalent circuit of, connector over the 8-12 GHz range. S.O.Ajose and N.A.Mathews 465
Coaxial-to-microstrip, equivalent of, connector over the 8-12 GHz range. S.O.Ajose and N.A.Mathews 465
Code:, intermediate ternary, A redundancy-reducing runlength code for digital facsimile transmission. U.Rothgirdt and G.Renelt 749
Codes, block, easily decodable efficient self-orthogonal. R.J.G.Smith 173
Codes from cubic residues. D.A.Bell 91
Codes from cubic residues. V.K.Bhargava 732
Codes, Hamming, asymptotically optimal soft decision decoding algorithms for. C.-E.Sundberg 38
Codesets, polynomial, efficient generation technique for, comments on. D.V.Sarwate 61
Codinf, error correction, partial correction of transmission errors in d.p.c.m. without recourse to. R.Steele, D.J.Esdale and D.J.Goodman 351
Coding, runlength systems for black-and-white facsimile pictures: a comparison. G.Renelt 573
Coloration and its reduction in phosphorus-doped low-loss optical fibres. R.Yamauchi, T.Kobayashi, T.Arai and K.Inada 461
Combinational logicfree realisations for high-speed m-sequence generation. A.C.Arvillias and D.G.Maritsas 500
Commennts of effective area of an antenna. R.M.Bevensee 336
Comments on active RC realisation of a 3rd-order bandpass Butterworth characteristics using equal-valued passive elements. F.W.Stephenson and J.Dunning-Davies 34
Comments on efficient generation technique for polynomial codesets. D.V.Sarwate 61
Comments on low-frequency behaviour of the Beverage aerial. J.R.Wait 272
Commutativity of time-varying systems. J.E.Marshall 539
Compact antenna range at 35 GHz. A.D.Olver and G.Tong 223
Compact optical isolator for near-infrared radiation. A.Shibukawa, A.Katsui, H.Iwamura and S.Hayashi 721
Comparison of numerical computations of optical-waveguide transmission parameters. J.M.Arnold, G.A.E.Crone and P.J.B.Clarricoats 273
Compensating fibre splice technique. D.B.Schilb and M.L.Dakss 257
Compensation technique for the design of wide-bane surface-acoustic-wave filters using multistrip couplers. E.L.Walker 413
Complex radar objects and polarisation dependence of received backscattered echoes. A.J.Poelman 433
Computations, numerical, comparison of, of optical-waveguide transmission parameters. J.M.Arnold, G.A.E.Crone and P.J.B.Clarricoats 273
Computer models, method of obtaining accurate transistor data for the evaluation of. A.Stevenson 436
Computer simulation of charge generation in trapatts. P.A.Blakey 434
Computing, fast algorithm for, complex number-theoretic transforms. I.S.Reed, K.Y.Liu and T.K.Truong 278
Computing the invariant zeros of multivariable systems. Y.Shamash 722
Computing the minimal polynomial by using Koenig's theorem. Y.Shamash 166
Conductor cable, impedance approximations for resistive. P.A.McGovern 52
Contact-degradation studies on GaAs transferred-electron devices using a focused backscattering technique. C.J.Palmstrom, D.V.Morgan and M.J.Howes 504
Contacts, ohmic, radiation-induced degradation of. R.Blundell, D.V.Morgan and M.J.Howes 483
Continuous measurement of optical-fibre attenuation during manufacture. G.J.Cannell 125
Control ot defects in silicon dioxide. D.A.Baglee, R.Gill, R.A.Stuart and W.Eccleston 144
Control problem, inverse optimal, for linear discrete-time systems. J.Willems and H.Van de Voorde 493
Control-system performance, effects of delay and uncertainty on. A.Thowsen 724
Control systems, 2nd-order discrete, optimal parameter surfaces for. N.E.Gough and P.R.Bunn 132
Controllability and observability of composite systems. N.K.Sinha and H.El-Sherief 409
Controllers, p.d. and p.i.d. on/off, design aid for approximate. E.M.Stafford 163
Convertor, accurate broadband square-to-triangle. S.F.Carter and E.A.Faulkner 381
Convertor, fast a.d., using a digital discriminator and a v.c.o. C.S.Aitchison 281
Convertor, new voltage-to-frequency, with nonlinearity correction. P.Bosnjakovic and J.Kon 05
Convertor, voltage-to-frequency, utilisation of a single inductorless neuristor line section as a. Z.Czarnul and M.Bialko 251
Correlation between stimulated scattering processes and laser-induced damage in crystalline quartz. C.Yu, M.F.Haw and H.Hsu 240
Correlation between the optical output characteristics and the time-dependent behaviour of semiconductor lasers. O.Krumpholz and H.Gottsmann 364
Correlation indetities for periodic sequences, new D.V.Sarwate and M.B.Pursley 48
Correlation, large-time-bandwidth-product, and holographic storage with an s.a.w. storage correlator. H.C.Tuan and G.S.Kino 709
Correlation of pulsed m.o.s. capacitor measurements with oxidation induced defects. T.F.Unter, P.C.T.Roberts and Lamb. D.R. 93
Correlation parameters of random binary sequences. H.F.A.Roefs and M.B.Pursley 488
Correlator, analogue c.c.d., using monolithic m.o.s.t. multipliers. J.Mavor, J.W.Arthur and P.B.Denyer Errata 491
Correlator, intracell c.c.d. programmable. N.E.Evans and H.S.Gamble 69
Correlator, s.a.w. storage, large-time-bandwidth-product correlation and holographic storage with an. H.C.Tuan and G.S.Kino 709
Correlator, storage, input cirrelation with the a.s.w.. P.Borden and G.S.Kino 470
Coupled, high-order mode, for millimetre wavelengths. B.Vowinkel 553
Coupled slot waveguide s.a.w. resonators. L.A.Coldren 559
Couplers, multistrip, surface-acoustic-wave beam shaping with. A.Ronnekleiv and K.Ingebrigtsen 349
Coupling, transverse light, from GaAs lasers into optical fibres. C.C.Timmermann 766
Cross-polarisation, forward scatter and, from spherical ice particles. A.W.Dissanayake and P.A.Watson 140
Crosspolar phase variations at 20 and 30 GHz on a satellite-earth path. R.G.Howell 405
Crosspolar variations on a satellite-earth path. J.Thirlwell, D.M.Knox and R.G.Howell 516
Crosspolarisation, calculation of forward scatter and, from ice spheroids. P.A.Watson and A.W.Dissanayake 555
Crosspolarisation, effect of surface distortions on the, performance of paraboloidal reflectors. B.Maca Thomas and P.T.Rayner 478
Crosspolarisation for linearly and circularly polarised waves propagating through a population of ice particles on satellite-earth paths. D.P.Haworth, N.J.McEwan and P.A.Watson 703
Crosspolarisation from high-altitude hydrometeors on a 20 GHz satellite radio path. N.J.McEwan, P.A.Watson, A.W.Dissanayake, D.P.Haworth and V.T.Vakili 13
Crosspolarisation phase due to ice crystals on microwave satellite paths. B.G.Evans and A.R.Holt 664
Crosspolarisation, scattering amplitudes and, of ice particles. B.G.Evans and A.R.Holt 342
Crosspolarised radiation from waveguides and narrow-angle horns. J.E.Hansen and L.Shafai 313
Crystal filters, single-sideband, simple design procedure for. J.L.Haine 687
Current-kink noise of n-channel enhancement e.s.f.i.-m.o.s. s.o.s. transistors. W.Fichtner and E.Hochmair 675
Cut-off frequency in radially inhomogeneous single-mode fibre. W.A.Gambling, D.N.Payne and H.Matsumura 139
Cutting optical fibres with a hot wire. G.D.Khoe and G.Kuyt 147

D

D.C. solution of bipolar-transistor circuits. A.A.Abdallah 396
D.D.A notch filter. P.F.Lister 324
Data-link applications, large-core high-n.a. fibres for. P.B.O'Connor, J.B.Macchesney and C.M.Melliar-Smith 170
Data reduction, method of, of sampled speech signals by using nonuniform sampling and a time-variable digital filter. T.Fjallbrant 334
Data-transmission filters, design tables for a class of. L.F.Lind and S.Nader-Esfahani 564
Decimation of m-sequences leading to any desired phase shift. B.Arazi 213
Decision-directed reference carrier generation in an autocorrelation receiver. K.H.Annecke 267
Decodable, easily, efficient self-orthogonal block codes. R.J.G.Smith 173
Decoding algorithms, asymptotically optimal soft decision, for Hamming codes. C.-E.Sundberg 38
Deep-level changes associated with the degradation of $GaAs_{0.6}P_{0.4}$ l.e.d.s. C.Lopez, A.Garcia and E.Munoz 460
Delay, effects of, and uncertainty on control-system performance. A.Thowsen 724
Delay equalisation of vesitgial-sideband waveform transmission systems. R.Weeks 291
Delay-line devices, fibre-optic, for r.f. signal processing. C.T.Chang, J.A.Cassaboom and H.F.Taylor 678

Delay lines, Lamb-wave, unidirectional transducer for. K.Toda and Y.Shinoda 363
Delta modulation, two-loop ternary adaptive. T.S.Lamba, M.N.Faruqui and R.Steele 337
Demodulation, synchronous, distortionless vestigal-sideband transmission with symmetric delay about the carrier frequency and. W.E.Thomson 58
Demodulator, 4-phase p.s.k. differential, using a.s.w. delay lines. Jeannine.Henaff, M.Carel, G.Lainey and M.Labasse 586
Demodulator, p.a.m. signal, design strategy for. R.Ishii 297
Depolarisation by solid hydrometeors. G.C.McCormick and A.Hendry 83
Depolarisation, measurements of, and attenuation at 11.7 GHz by using the communications technology satellite. W.L.Nowland, J.I.Strickland, J.Schlesak and R.L.Olsen 750
Depolarisation, rain, theoretical relationship between, and attenuation. W.L.Nowland, R.L.Olsen and I.P.Shkarofsky 676
Depolarisation, satellite-earth signal, at 30 GHz in the absence of significant fading. P.F.Shutie, J.E.Allnutt and E.G.MacKenzie 01
Depolarisation, satellite-ground signal, at millimetre wavelengths through thunderstorms. P.F.Shutie, E.C.MacKenzie and J.E.Allnutt 556
Derivation of the recursive maximum-likelihood identification algorithm. V.Panuska 19
Describing functions, limit cycles and reduced models in nonlinear systems. S.K.Woon and H.Nicholson 185
Design aid for approximate p.d. and p.i.d. on/off controllers. E.M.Stafford 163
Design of a root-locus plotter. G.Thomas 410
Design of an active distributed RC lowpass network. G.H.Tomlinson and L.Unsworth 575
Design of high-efficiency antennas employing dielectric-cone feeds. R.K.Chugh and L.Shafai 169
Design of waveguide-to-microstrip transitions specially suited to millimetre-wave applications. L.J.Iavedan 604
Design strategy for p.a.m. signal demodulator. R.Ishii 297
Design tables for a class of data-transmission filters. L.F.Lind and S.Nader-Esfahani 564
Detection, multifrequency tone, by zero-interval analysis. C.S.A.Smith 03
Determinant of the null return-difference matrix. Wai-Kai Chen 306
Determination of GaAs m.e.s.f.e.t. equivalent-circuit parameters from I/V and 1 MHz measurements. J.M.Borrego, R.J.Gutmann, M.Chudzicki and S.Moghe 756
Determination of P and D parameters of on/off controllers. E.M.Stafford 429
Determination of refractive index and ellipticity of an unclad elliptical optical fibre. P.L.Chu, C.Saekeang and Y.M.Chow 41
Determination of the wavelength of zero material dispersion in optical fibres by pulse-delay measurements. D.N.Payne and A.H.Hartog 627
Development in lumped-component pulse-compression networks. J.P.Newsome and O.Safavian 205
Devices, GaAs transferred-electron, contact-degradation studies on, using a focused back-scattering technique. C.J.Palmstrom, D.V.Morgan and M.J.Howes 504
Diclectric-clad discone. K.F.Woodman 264
Dielectric loss measurements, high-sensitivity, by using super-conducting microwave resonators in an oscillator loop. W.Meyer 07
Dielectric-ring-loaded waveguide feed. A.Kumar and G.A.Hockham 436
Dielectric-tube waveguide, transmission characteristics of a, with an outer higher-index cladding. M.Miyagi and S.Nishida 274
Differential pulse regenerator driven by 1 Gbit/s p.c.m.-type signals from an avalanche photodiode. U.Barabas 536
Diffraction-optimised shaped-beam reflector antennas. R.D.Elliot and G.T.Poulton Errata 491
Diffraction, uniform, coefficients for an impedance wedge. G.L.James 403
Diffused waveguides: mode perturbation by thin-film cladding. M.Johnson 67
Diffusion-controlled decay of laser-excited photoconductivity in optoelectronic switches. W.Platte 321
Digital channel equalisation, fixed-lag smoother for. E.Dalle Mese, D.Giuli and M.Pellegrini 366
Digital discriminator, fast a.d. convertor using a, and a v.c.o.. C.S.Aitchison 281
Digital filter, time-variable, method of data reduction of sampled speech signals by using nonuniform sampling and a. T.Fjallbrant 334
Digital filtering using polynomial transforms. H.J.Nussbaumer 386
Digital filtering using polynomial transforms. H.J.Nussbaumer 386
Digital filters, residue-number-arithmetic, multipliers for. M.A.Soderstrand and E.L.Fields 164
Digital phase-shift generator. G.L.Gooberman and J.Ainscough 772
Digital-signal transmission experiments, high-speed, by optical wavelength-division multiplexing. S.Sugimoto, K.Minemura, K.Kobayashi, M.Seki, M.Shikada, A.Ueki, T.Yanase and T.Miki 680
Digital-systems, high-speed, symbol-by-symbol jitter measurement in. G.C.Gurst, W.H.Holmes and R.A.Zakarevicius 81
Digital transmission, new codes for. D.Munoz-Rodriguez and K.W.Cattermole 340
Digital transmission systems, expressions for the analysis of. D.G.W.Ingram 250
Digital wattmeter, new form of, using a double dual-slope principle. J.R.Stockton 406
Diodes, double-heterostructure superluminescent, modulation characteristics of. W.Harth and M.C., Amann 291
Diodes, GaAs Schottky mixer, local-oscillator-induced noise in. R.J.Mattauch and F.S.Fei 22
Diodes, notch-front, for millimetre-wave integrated circuits. M.V.Schneider and E.R.Carlson 745
Diodes, p-i-n, waveguide antenna switches using. G.Craven and R.R.Thomas 518
Diodes, reference, low-frequency multiplication noise in, for small multiplication factors. M.M.Jevtic and D.A.Tjapkin 468
Diodes, Schottky mixer, made by a new method. J.Lacombe, J.P.Duchemin, M.Bonnet and D.Huyghe 472
Diodes, two Schottky, connected metal to metal, measurements of the electron accumulation on. N.Hashizume, S.Kataoka and K.Tomizawa 495
Discrete radiation from curved single-mode fibres. R.A.Sammut 418
Discrete-time systems, linear, inverse optimal control problem for. J.Willems and H.Van de Voorde 493
Dispersion aids optimisation, nonlinear profile, of graded-index fibres. S.Geckeler 440
Dispersion characteristics of a ferrite microstrip by a transverse-mode-matching technique. N.Krause Errata 120
Dispersion-limited, material-, operation of high-bit-rate optical-fibre data links using l.e.d.s.. W.M.Muska, Tingye Li,, T.P.Lee and A.G.Dentai 605
Dispersion, profile, measurement of, in optical fibres: a direct technique. F.M.E.Sladen, D.N.Payne and M.J.Adams 212
Dispersion, wavelength, in a single-mode fibre. T.Miyashita, M.Horiguchi and A.Kawana 227
Dispersion, zero materiao, determination of the wavelength of, in optical fibres by pulse-delay measurements. D.N.Payne and A.H.Hartog 627
Dispersive propagation in surface-acoustic-wave pulse-compression filters. D.P.Morgan and J.M.Deacon 741
Displays, c.c.d.-addressed liquid-crystal. S.D.Brotherton, A.Gill and M.J.King 270
Distortion, nonlinear phase, and its compensation in l.e.d. direct modulation. K.Asatani and T.Kimura 162
Distortionless vestigal-sideband transmission with symmetric delay about the carrier frequency and synchronous demodulation. W.E.Thomson 58
Distributed, active RC lowpass network, design of an. G.H.Tomlinson and L.Unsworth 575
Diversity -space, effect of squall-line direction on, improvement obtainable with millimetre-wave satellite radiocommunication systems. E.C.MacKenzie and J.E.Allnutt 571
Diversity, space, variation of attenuation and, with elevation angle on 12 GHz satellite-to-ground radio paths. J.E.Allnutt 346
Double epitaxial silicon avalanche photodiodes for optical-fibre communications. K.Nishida, K.Ishii, K.Minemura and K.Taguchi 280
Double-split-electrode transversal filter. T.Foxall, A.Ibrahim and G.Hupe 323

E

E.I.R.P. allocation for a nonlinear satellite channel with multiple transmit beams and carriers. J.Arnbak 652
E.M. spectra, identification of, by knowl pole sets. E.K.Miller, J.N Brittingham, and J.L.Willows 774
Easily decodable efficient self-orthogonal block codes. R.J.G.Smith 173
Edge condition and mode-matching solutions in the presence of gyrotropic media. M.Hoffman 56
Effect, magnetoelastic, surface-acoustic-wave oscillator tuned by. G.Volluet 588
Effect of gain control and modulation on harmonic nonlinear operators, with applications to audio signal processing. M.A.Gerzon 118
Effect of ionised impurity scattering on the electron transit time in GaAs and InP f.e.t.s.. G.Hill, P.N.Robson, A.Majerfeld and W.Fawcett 235
Effect of scattering in measurement of rain attenuation by passive radiometry. R.Chadha and J.A.Lane 177
Effect of skywave field strengths of proximity to a discontinuity in the earth's electrical properties. A.Kinase 184
Effect of squall-line direction on space-diversity improvement obtainable with millimetre-wave satellite radiocommunication systems. E.C.MacKenzie and J.E.Allnutt 571
Effect of substrate temperature on d.c.-sputtered antimony-doped tin-dioxide films. A.G.Sabnis and K.Chang 113
Effect of surface distortions on the crosspolarisation performance of paraboloidal reflectors. B.Maca Thomas and P.T.Rayner 478
Effect of the reverse bias between channel and substrate on the effective mobility of electrons in a Ge i.g.f.e.t.. K.Zo Don, I.G.Neizvestny and V.N.Ovsuyk 624
Effect of thermal impedance on chirp characteristics of high-efficiency pulsed InP oscillators. D.M.Brookbanks 697
Effect of vibration on s.a.w.-oscillator noise spectra. R.D.Weglein and O.W.Otto 103 Errata 272
Effects, modelling of Gunn-domain, in GaAs m.e.s.f.e.t.s.. H.A.Willing and P.de Santis 537
Effects of delay and uncertainty of control-system performance. A.Thowsen 724
Effects of γ-irradiation on some cholesteric products. B.Kerllenevich and A.Coche 261
Effects of microstrip discontinuities on GaAs-m.e.s.f.e.t.-amplifier gain performance. R.J.Akello, B.Easter and I.M.Stephenson 160
Efficient bulk wave excitation on ST quartz. K.H.Yen, K.L.Wang and R.S.Kagiwada 37
Efficient hard-wired digital fast-fourier-transform processor. R.J.Risk 458
Efficient intensity modulation in a Ti-diffused $LiNbO_3$ branched optical waveguide device. H.Sasaki 693
Efficient pitch estimation for speech and music. W.H.Tucker and R.H.T.Bates 357
Efficient synchronisation signal for the switched satellite. C.R.Carter 646
Electric-field-induced anisotropy of thin semiconductor films. Barybin. A.A. 243
Electrical properties of thermal oxides on GaAs. D.N.Butcher and B.J.Sealy 558
Electro-optic multichannel waveguide deflector. H.Sasaki and R.M.De La Rue 295
Electromagnetic analogue, experimental verification of the, of a theorem due to Dean. A.L.Cullen, J.Gallop and Anne E.Sloane 570
Electron-beam-defined gates, GaAs power f.e.t.s. with. H.M.Macksey, T.G.Blocker and F.H.Doerbeck 312
Electronic steering of multiple nulls for circular arrays. D.E.N.Davies and M.Rizk 669
Electrons traps in bulk and epitaxial GaAs crystals. C.M.Martin, A.Mitonneau and A.Mircea 191
Energy balance at arc cathode root on copper with oxide films above 25 nm thickness. A.H.Hitchcock and A.E.Guile 172
Enhancement-mode GaAs m.o.s.f.e.t. on semi-insulating substrate using a self-aligned gate technique. E.Kohn and A.Colquhoun 73 Errata 168
Epitaxial GaAs crystals, hole traps in bulk and. A.Mitonneau, G.M.Martin and A.Mircea 666
Equal-valued grounded-capacitor active RC realisation of all-pole transfer functions. S.C.Dutta Roy, S.C.Prasad and D.K.Bhargava 566
Equalisation, digital channel, fixed-lag smoother for. E.Dalle Mese, D.Giuli and M.Pellegrini 366
Equalisation, hybrid waveform, scheme for coaxial p.c.m. systems. K.S.Chung and D.G.W.Ingram 332
Equalisation, phase, of analogue magnetic recorders by transversal filtering. D.Preis 127
Equalisation, wideband, and signal averaging applied to the pulse echo return loss testing of telecommunication coaxial cables. P.Cochrane and J.K.Perkins 481
Equaliser, coaxial-cable, employing active distributed RC networks. W.Maggi, G.Orlandi and M.Salerno 471
Equaliser, RC active variable-group-delay. G.Wilson 424
Equivalent circuit of coaxial-to-microstrip connector over the 8-12 GHz range. S.O.Ajose and N.A.Mathews 465
Equivalent-circuit parameters, determination of GaAs m.e.s.f.e.t., from I/V and 1 MHz measurements. J.M.Borrego, R.J.Gutmann, M.Chudzicki and S.Moghe 756
Equivalent circuits of the asymmetric crossover junction. R.J.Akello, B.Easter and I.M.Stephenson 117
Error-correcting codes, burst, redundancy bounds for multiple-. G.Benelli, C.Bianciardi and V.Cappellini 389
Error correction coding, partial correction of transmission errors in d.p.c.m. without recourse to. R.Steele, D.J.Esdale and D.J.Goodman 351
Error-detection in a d.p.s.k. system. P.S.Moharir 27

Error detector, predictable sample, and a planar prediction corrector for removal of isolated transmission errors in Walsh-Hadamard transformed pictures. D.M.Fenwick and R.Steele 08
Error probabilities due to atmospheric noise in practical m-c.p.s.k. and ideal f.s.k. receivers. I.M.Kostic 284
Estimating the correlation coefficient of highly correlated clutter. W.J.Szanjowski Errata 491
Evidence for coherent noise in pumped Schottky-diode mixers. N.J.Keen 282
Excitation, efficient bulk wave, on ST quartz. K.H.Yen, K.L.Wang and R.S.Kagiwada 37
Experimental comparison between induced surface current and scattered electromagnetic waves for a metal target with time-varying characteristics. A.J.Bahr and J.P.Petro 777
Experimental verification of mode shape in s.a.w. grating resonators. L.A.Coldren, H.A.Haus and K.L.Wang 642
Experimental verification of the electromagnetic analogue of a theorem due to Dean. A.L.Cullen, J.Gallop and Anne E.Sloane 570
Expressions for the analysis of digital transmission systems. D.G.W.Ingram 250

F

F.D.M. channel filtering, application of c.c.d.s. to,: a phase-cancellation system. F.Molo and B.Ricco 704
F.E.T. amplifiers, K-Band. M.M.Nowak, P.A.Terzian and R.D.Fairman 159
F.E.T., GaAs, modelling the 3rd-order intermodulation-distortion properties of a. R.S.Tucker and C.Rauscher 508
F.E.T., GaAs, submicrometre A10.5GaO.5As heterojunction gate. H.Morkoc, S.G.Bandy, G.A.Antypas and R.Sankaran 487
F.E.T., low-noise GaAs, intentional side etching to achieve. F.Murai, H.Kurono and H.Kodera 316
F.E.T., low-temperature, for low-power high-speed logic. H.Rees, G.S.Sanghera and R.A.Warriner 156
F.E.T., M.E.S., GaAs, equivalent-circuit parameters, determination of, from I/V and 1 MHz measurements. J.M.Borrego, R.J.Gutmann, M.Chudzicki and S.Moghe 756
F.E.T., M.O.S., 1.5 μm-gate GaAs, microwave capability of. H.Tokuda, Y.Adachi and T.Ikoma 761
F.E.T., microwave GaAs, modelling of, in common-gate operation. J.Zapata-Ferrer and B.Loriou 106
F.E.T.S., GaAs and InP, effect of ionised impurity scattering on the electron transit time in. G.Hill, P.N.Robson, A.Majerfeld and W.Fawcett 235
F.E.T.S., GaAs, method for measuring 3rd-order intermodulation distortion in. C.Rauscher and R.S.Tucker 701
F.E.T.s, GaAs power, with electron-beam-defined gates. H.M.Macksey, T.G.Blocker and F.H.Doerbeck 312
F.E.T.S., GaAs, with silicon-implanted channels. J.K.Kung, R.M.Malbon and D.H.Lee 187
F.E.T.S., GaSAs, with graded channel doping profiles. R.E.Williams and D.W.Shaw 408
F.E.T. y.i.g.-tuned oscillators, octave-band GaAs. R.J.Trew 629
F.S.K. bursts for efficient clutter rejection. P.R.Mahapatra 653
F.S.K. receivers, in practical m-c.p.s.k. and ideal, error probabilities due to atmospheric noise. I.M.Kostic 284
Fabrication of low-loss single-mode fibres. A.Kawana, T.Miyashita, M.Nakahara, M.Kawachi and T.Hosaka 188
Facsimile, black-and-white, pictures: runlength coding systems for, a comparison. G.Renelt 573
Facsimilie transmission, digital, a redundancy-reducing runlength code for, intermediate ternary code:. U.Rothgirdt and G.Renelt 749
Fading, analysis of, due to rain, snow and multipath propagation for 11 GHz radio links variously located in England. D.J.W.Turner and R.L.O.Tattersall 619
Fading, scintillation, at 110 and 36 GHz, wavelength dependence of. K.L.Ho and N.D.Mavrokoukoulakis 181
Fading, significant, satellite-earth signal depolarisation at 30 GHz in the absence of. P.F.Shutie, J.E.Allnutt and E.G.MacKenzie 01
Fast a.d. convertor using a digital discriminator and a v.c.o.. C.S.Aitchison 281
Fast algorithm for computing complex number-theoretic transforms. I.S.Reed, K.Y.Liu and T.K.Truong 278
Fast fabrication method for thick and highly multimode optical waveguides. G.H.Chartier, P.Jaussaud, A.D.de Oliveira and O.Parriaux 763
Fast numerical algorithm for the recompression of dispersed time signals. A.K.Booer, J.Chambers and I.M.Mason 453
Fast pulse behaviour of InGaAsP/InP double-heterostructure lasers emitting at 1.27 μm. T.Yamamoto, K.Sakai, S.Akiba and Y.Suematsu 143
Faster nearest-neighbour calculations. B.G.Batchelor 304
Feature filtering: the digital enhancement and suppression of periodic waceforms. P.A.Lynn 220
Feed elements, small practical, numerical analysis of, in a ground plane. P.Balling and J.Jacobsen 717
Feed, waveguide, dielectric-ring-loaded. A.Kumar and G.A.Hockham 436
Feedback amplifiers, referred impedance noise analysis for. J.L.Hullett and T.V.Muoi 387
Feedback, output, necessary conditions for stabilisation and pole placement with. M.Tarokh 148
Feeder network, null steering in linear arrays by using amplitude control of signals in the. D.S.Hicks 198
Feeds, corrugated, matrix forumlation of, by using impedance boundary conditions. L.Shafai and J.E.Hansen Errata 491
Feeds, dielectric-cone, design of high-efficiency antennas employing. R.K.Chugh and L.Shafai 169
Femtojoule logic circuit using normally-off GaAs m.e.s.f.e.t.s.. G.Bert, G.Nuzillat and C.Arnodo 644
Ferrite bandpass filter, tunable millimetre-wave, with reduced biasing field. H.Brand and N.Krause 576
Fibre, graded-index, optical transmission experiment at 1.12 Gbit/s using a, with a length of 1.652 kM. C.Baack, G.Elze, G.Walf, G.Gliemeroth, D.Krause and N.Neuroth 452
Fibre, low-loss, prepared under high deposition rate by modified c.v.d. technique. K.Yoshida, Y.Furui, S.Sentsui and T.Kuroha 608
Fibre, low-loss single-mode, at the material-dispersion-free wavelength of 1.27 μm. M.Kawachi, A.Kawana and T.Miyashita 442
Fibre, medium-numerical-aperture low-pulse-dispersion. J.P.Hazan, J.J.Bernard and D.Kuppers 540
Fibre-optic delay-line devices for r.f. signal processing. C.T.Chang, J.A.Cassaboom and H.F.Taylor 678
Fibre-optical communication systems, multiplexer at 5 Gbit/s for. R.Tell, P.Torphammar and S.T.Eng 765
Fibre, -optical, end, hand-held tool for, preparation. J.E.Fulenwider and M.L.Dakss 578
Fibre, single-mode, wavelength dispersion in a. T.Miyashita, M.Horiguchi and A.Kawana 227
Fibre splice technique, compensating. D.B.Schilb and M.L.Dakss 257
Fibres, curved single-mode, radiation of discrete beams from. C.G.Someda 712
Fibres, curved step-index optical, modes in. W.A.Gambling and H.Matsumura 532
Fibres, graded-index, group delay in, with non-power-law refractive profiles. S.Geckeler 29
Fibres, graded-index, interference patterns from very thick samples for determining the profile of. A.Nicia 309
Fibres, graded-index, nonlinear profile dispersion aids optimisation of. S.Geckeler 440
Fibres, graded-index, novel technique for the measurement of differential mode attenuation in. M.Eve 744
Fibres, incoherently illuminated multimode, spatial correlation of field intensity in. E.Bianciardi, V.Rizzoli and C.G.Someda 25
Fibres, large-core high-n.a., for data-link applications. P.B.O'Connor, J.B.Macchesney and C.M.Melliar-Smith 170
Fibres, low-loss single-mode, fabrication of. A.Kawana, T.Miyashita, M.Nakahara, M.Kawachi and T.Hosaka 188
Fibres, multimode, new principle to measure loss and mode-conversion parameters of. S.Kawakami 706
Fibres, optical, intensity modulation of light transmitted in curved. R.A.Sammut 545
Fibres, practical single-mode, simple characterisation factor for. W.A.Gambling and H.Matsumura 691
Fibres, single-mode, low-loss splices for. A.R.Tynes and R.M.Derosier 673
Fibres, single-mode, mode shift at bends in. W.A.Gambling, H.Matsumura and R.A.Sammut 695
Fibres, single-mode, pulse distortion in, with microbending. K.Petermann 49
Fibres, single-mode, stress birefringence in. O.G.Leminger 370
Field-contour plots in parabolic cylinder by method of moments. K.R.G.Bailey, T.S.M.Maclean and G.Morris 207
Field-effect transistors, junction, change of some properties of, after ionising irradiation. G.Dehmel and D.Braunig 601
Field strength, measurement of, for mobile services at v.h.f. and u.h.f. for the city of Melbourne. J.Steel and R.A.Court 710
Figure of merit for avalanche photodiodes. H.Kanbe and T.Kmura 262
Films, oxide, energy balance at arc cathode root on copperwith, above 25 nm thickness. A.H.Hitchcock and A.E.Guile 172
Filter circuit, new multifunction biquadratic, with inherently stable Q-factor. L.Brown and A.S.Sedra 719
Filter, constant-impedance bandpass microwave, new type of, based on the commutating principle. B.F.Nicholson, B.K.Watson and C.S.Barham 535
Filter, d.d.a. notch. P.F.Lister 324
Filter, digital, time-variable, method of data reduction of sampled speech signals by using nonuniform sampling and a. T.Fjallbrant 334
Filter, grounded-capacitor bandpass, using the operational-amplifier pole. R.Nandi 713
Filter, interference-rejection, using charge-coupled devices. J.Carver and G.S.Hobson 732
Filter, new c.c.d. programmable transversal. B.E.Burke and W.T.Lindley 521
Filter, novel microstrip bandstop. R.E.Pearson 561
Filter, passive-, design, MUCROER polynomials in. M.Biey 730
Filter, programmable analogue c.c.d. transversal, monolithic. P.B.Denyer, J.W.Arthur and J.Mavor 739
Filter, s.a.w., two-port description of a. C.F.Vasile 326
Filter, surface-acoustic-wave, frequency response of a, using a waveguide. M.Yamaguchi, T.Temma, K.Takato and H.Kogo 204
Filter, transversal, double-split-electrode. T.Foxall, A.Ibrahim and G.Hupe 323
Filter,-transversal, equalisers, least-squares, time-domain deconvolution for. D.Preis 356
Filter, tunable millimetre-wave ferrite bandpass, with reduced biasing field. H.Brand and N.Krause 576
Filtering, adaptive, sequential regression considerations of. N.Ahmed, D.L.Doldan, D.R.Hummels and D.D.Parikh 446
Filtering:, feature, the digital enhancement and suppression of periodic waveforms. P.A.Lynn 220
Filtering, phase, with time reversal. P.B.Fellgett 153
Filtering, transversal, phase equalisation of analogue magnetic recorders by. D.Preis 127
Filters, active RC allpass, additional generalisation scheme of. D.Patranabis and M.P.Tripathi 167
Filters, c.c.d. transversal, a new approach for, parallel-in/ serial-out. K.Knauer, L.Mader, M.-J.Pfleiderer and M.Schlichte 126 Errata 272
Filters, data-transmission, design tables for a class of. L.F.Lind and S.Nader-Esfahani 564
Filters, digital, residue-number-arithmetic, multipliers for. M.A.Soderstrand and E.L.Fields 164
Filters, lowpass RC active, maximally flat approximation of, with multiple real pole. M.Biey and A.Premoli 76
Filters, passband, cascaded s.a.w. gratings as. H.A.Haus and R.V.Schmidt 445
Filters, synthesis of, with minimum integrated power-loss ratio in the passband. V.Picciarelli and M.Torre 612
Filters, synthesis of, with minimum integrated power-loss ratio in the passband. K.M.M.Prabhu, V.U.Reddy and J.P.Agrawal 600
Filters, wideband surface-acoustic-wave, compensation technique for the design of, using multistrip couplers. E.L.Walker 413
Fixed-lag smoother for digital channel equalisation. E.Dalle Mese, D.Giuli and M.Pellegrini 366
Formulas for spectra of periodic frequency-shift-keyed signals. Z.Grzegorek and P.Szulakiewicz 90
Forward scatter and cross-polarisation from spheroidal ice particles. A.W.Dissanayake and P.A.Watson 140
Fourier transform, 'instant'. J.E.Gibbs 122
Frequency, baseband, response, measurement of, of multimode fibre by using a new type of mode scrambler. M.Tokuda, S.Seikai, K.Yoshida and N.Uchida 146
Frequency-hopped waveform synthesis by using s.a.w. chirp filters. E.W.Patterson, A.S.M.Dods and J.M.Hannah 633
Frequency multipliers, GaAs Schottky-barrier-diode, in 300 and 450 GHz bands. T.Takada, T.Yagasaki and M.Hirayama 699
Frequency response of a surface-acoustic-wave filter using a waveguide. M.Yamaguchi, T.Temma, K.Takato and H.Kogo 204
Frequency-shift-keyed signals, formulas for spectra of periodic. Z.Grzegorek and P.Szulakiewicz 90
Frequency-,sinusoidal,-halving technique. R.W.J.Barker and K.P.Corrin 201
Function, sine, circuits for the precise synthesis of the. B.Gilbert 506

G

$Ga_{1-x}Al_xAs$, implantation of selenium into. P.N.Favennec, L.Henry and T.Janicki 338
$GaAs_{0.6}P_{0.4}$ l.e.d.s, deep-level changes associated with the degradation of. C.Lopez, A.Garcia and E.Munoz 460

GaAs crystals, epitaxial, hole traps in bulk and. A.Mitonneau, G.M.Martin and A.Mircea 666
GaAs, electrical properties of thermal oxides on. D.N.Butcher and B.J.Sealy 558
GaAs f.e.t.s. with graded channel doping profiles. R.E.Williams and D.W.Shaw 408
GaAs f.e.t.s. with silicon-implanted channels. J.K.Kung, R.M.Malbon and D.H.Lee 187
GaAs f.e.t., submicrometre A10.5ASGaO.5As heterojunction gate. H.Morkoc, S.G.Bandy, G.A.Antypas and R.Sankaran 487
GaAs m.e.s.f.e.t.: a high-speed optical detector. C.Baack, G.Elze and G.Walf 193
GaAs m.e.s.f.e.t., simplified, model to 10GHz. R.A.Minasian 549
GaAs power f.e.t.s. with electron-beam-defined gates. H.M.Macksey, T.G.Blocker and F.H.Doerbeck 312
GaAs Schottky-barrier-diode frequency multipliers in 300 and 450 GHz bands. T.Takada, T.Yagasaki and M.Hirayama 699
GaAs, series-connected, and Si impatt-diode chips: sone new results. C.T.Rucker, J.W.Amoss, G.N.Hill and N.W.Cox 331
Gain, loss in, and boresight crosspolarisation in reflector antennas with surface errors. S.I.Ghobrial 623
Gate GaAs m.o.s.f.e.t., 1.5 μm-, microwave capability of. H.Tokuda, Y.Adachi and T.Ikoma 761
Generators, resonant, long-range-interaction, nonlinear theory of. A.A.Shmai'ko, O.A.Tretikov and D.M.Vavriv 480
Glass, compound-, low-loss, optical fibre. K.J.Beales, C.R.Day, W.J.Duncan and G.R.Newns 755
Glass, silica, optical absorption characteristics of hydroxyl radicals in phosphorus-containing. Y.Mita, S.Matsushita, T.Yanase and H.Nomura 55
Grating-coupled GaAs-GaAlAs lasers with distributed Bragg reflectors. Y.Uematsu, M.Yamamoto and Y.Unno 759
Groove guide as a low-loss transmission system for short millimetric waves. D.J.Harris and K.W.Lee 775
Grounded-capacitor bandpass filter using the operational-amplifier pole. R.Nandi 713
Group delay in graded-index fibres with non-power-law refractive profiles. S.Geckeler 29
Guides, X-ray, properties of. P.S.Chung and R.H.Pantell 527
Gunn diodes, $Ga_xIn_{1-x}Sb$, observations of high-field domains in. M.Kawashima, K.Ohta and S.Kataoka 379
Gunn-domain, modelling of, effects in GaAs m.e.s.f.e.t.s.. H.A.Willing and P.de Santis 537
Gunn-effect high-speed carry finding device for 8 bit binary adder. N.Hashizume, S.Kataoka and K.Tomizawa 637
Gunn-effect memory device using the charge accumulation on a Schottky-trigger electrode. N.Hashizume and S.Kataoka 60
Gunn oscillators, cavity-stabilised, temperature compensation of. R.Knochel and K.Schunemann 723
Gyromagnetic nonlinear element and its application as a pulse-shaping transmission line. T.Yagi and A.Noguchi 683

H

Hand-held tool for optical-fibre end preparation. J.E.Fulenwider and M.L.Dakss 578
Heterojunction-gate GaAs f.e.t., normally-off $Al_{0.5}Ga_{0.5}As$. H.Morkoc, S.G.Bandy, G.A.Antypas and R.Sankaran 747
High-bit-rate pulse regeneration and injection laser modulation using a diode circuit. U.Wellens 529
High-efficiency and high-peak-power InP transferred-electron oscillators. J.Mun 275
High-efficiency laser-to-fibre coupling circuit using a combination of a cylindrical lens and a selfoc lens. Y.Odagiri, M.Shikada and K.Kobayashi 395
High-level injection in the epilayer of the I²L transistor. K.Yu 202
High-order mode coupler for millimetre wavelengths. B.Vowinkel 553
High-power 10%-tuning-bandwidth varactor-controlled impatt oscillator/amplifier. P.W.Braddock and R.D.Hodges 179
High-power pulsed and c.w. silicon double-drift impatt amplifiers at X-band. P.W.Braddock and R.D.Hodges 176
High-power pulsed with c.w. silicon double-drift impatt amplifiers at X-band. P.W.Braddock and R.D.Hodges 176
High-Q-factor s.a.w. resonators at 780 MHz. K.R.Laker, T.L.Szabo and W.J.Kearns 97
High-sensitivity dielectric loss measurements by using super-conducting microwave resonators in an oscillator loop. W.Meyer 07
High-speed current-mode threshold gate with clamps and current comparison. R.Launee 99
High-speed digital-signal transmission experiments by optical wavelength-division multiplexing. S.Sugimoto, K.Minemura, K.Kobayashi, M.Seki, M.Shikada, A.Ueki, T.Yanase and T.Miki 680
High speed I²L gate with self-aligned double-diffusion injector. S.Shinozaki 06
High-speed modulo-3 generator. D.D.Gajski and C.Vora 770
High-speed optical preamplifiers. J.L.Hullett, T.V.Muoi and S.Moustakas 688
Hilbert-transformer side-chain phase equaliser for analogue magnetic recording. D.Preis 616
Hole traps in bulk and epitaxial GaAs crystals. A.Mitonneau, G.M.Martin and A.Mircea 666
Holographic storage, large-time-bandwidth-product correlation and, with an s.a.w. storage correlator. H.C.Tuan and G.S.Kino 709
Horizontal shear surface waves on a laminated composite. B.A.Auld, G.S.Beaupre and G.Herrmann 525
Horns, conical, radiation properties of 90°. G.L.James 293
Hybrid waveform equalisation scheme for coaxial p.c.m. systems. K.S.Chung and D.G.W.Ingram 332
Hydrometeors, solid, depolarisation by. G.C.McCormick and A.Hendry 83

I

I.G.F.E.T., Ge, effect of the reverse bias between channel and substrate on the effective mobility of electrons in a. K.Zo Don, I.G.Neizvestny and V.N.Ovsuyk 624
Ice crystals, crosspolarisation phase due to, on microwave satellite paths. B.G.Evans and A.R.Holt 664
Ice particles, crosspolarisation for linearly and circularly polarised waves propagating through a population of, on satellite-earth paths. D.P.Haworth, N.J.McEwan and P.A.Watson 703
Ice particles, scattering amplitudes and crosspolarisation of. B.G.Evans and A.R.Holt 342
Ice particles, spheroidal, forward scatter and cross-polarisation from. A.W.Dissanayake and P.A.Watson 140
Ice spheroids, calculation of forward scatter and crosspolarisation. P.A.Watson and A.W.Dissanayake 555
Identification algorithm, recursive maximum-likelihood, derivation of the. V.Panuska 19
Identification algorithms, recursive maximum-likelihood, initial convergence of. J.P.Norton 621
Identification of e.m. spectrum by known pole sets. E.K.Miller, J.N Brittingham, and J.L.Willows 774
Identification of nonlinear systems using the Wiener model. S.A.Billings and S.Y.Fakhouri 502
Image enhancement functions, search procedure for efficient superdirective array and. A.P.Anderson, M.M.Dawoud, J.C.Bennett and P.D.Patel 43 Errata 168
Image enhancement in the scanning acoustic microscope using analogue filters. H.K.Wickramasinghe and J.Heiserman 776
Image sensor, new 1024-element charge-coupled linear, with high sensitivity. N.Suzuki 716
Imaging, microwave, of subsurface cylindrical scatters from crosspolar backscatter. A.P.Anderson and P.J.Richards 617
Impatt amplifiers, high-power pulsed and c.w. silicon double-drift, at X-band. P.W.Braddock and R.D.Hodges 176
Impatt-diode amplifier, active broadbanding of an X-band. A.S.Bains and C.S.Aitchison 289
Impatt-diode-amplifier on ferrite, thick-film 3-stage m.i.c.. R.Genner, W.Richmond and P.W.Braddock 193
Impatt-diode chips:, series-connected GaAs and Si, sone new results. C.T.Rucker, J.W.Amoss, G.N.Hill and N.W.Cox 331
Impatt-diode circuits, inductive loading of the bias path in. F.E.Marchetti and M.G.Reggiani Errata 92
Impatt-diode circuits, low-frequency stability of. M.G.Reggiani 82
Impatt diodes, observed behaviour of high-efficiency, over a 30% frequency range. P.W.Huish 178
Impatt-diodes, submillimetre wave silicon, liquid-nitrogen-cooled. T.Ishibashi, M.Ino, T.Makimura and M.Ohmori 299
Impatt oscillators, leakage current enhancement in, by photoexcitation. H.P.Vyas, R.J.Gutmann and J.M.Borrego 189
Impedance approximations for resistive conductor cable. P.A.McGovern 52
Implantation de selenium dans le $Ga_{1-x}Al_xAs$ (Implanatation of selenium into $Ga_{1-x}Al_xAs$). P.N.Favennec, L.Henry and T.Janicki 338
Implantation into GaAs, high-energy selenium, active layers for device applications by using. R.K.Surridge and B.J.Sealy 233
Improved cavity-stabilised oscillator circuit for single-mode operation. R.Knochel and K.Schunemann 583
Improved forms of threshold-logic-function implementation. L.A.M.Bennett 368
Improved Hamming-distance analysis for digital learning networks. T.J.Stonham 155
Improved versatile gigahertz pulse generator. U.Barabas and U.Langmann 28
Improving the large-signal models of bipolar transistors by dividing the intrinsic base into two lateral sections. H.-M.Rein 40 Errata 168
Inclusion of conductivity in silicon s.a.w. component design. A.Venema and R.F.Humphreys 594
Index profile, nondestructive measurement of, of an optical-fibre preform. P.L.Chu 736
Inductive loading of the bias path in impatt-diode circuits. F.E.Marchetti and M.G.Reggiani Errata 92
Influence of a central depression on the dispersion characteristics of a graded-index profile. P.F.Checcacci, R.Falciai and A.M.Scheggi 378
Influence of diffusion on the small-signal properties of Misawa diodes. R.Schawarz, H.W.Thim and H.W.Potzl 288
Influence of junction roughness on solar-cell characteristics. G.De Mey, B.Jacobs and F.Fransen 657
Infrared, near-, radiation, compact optical isolator for. A.Shibukawa, A.Katsui, H.Iwamura and S.Hayashi 721
Initial convergence of recursive maximum-likelihood identification algorithms. J.P.Norton 621
Injection logic, new v-groove integrated. S-Y.Yu 382
Injector, self-aligned double-diffusion, high speed I²L gate with. S.Shinozaki 06
InP t.e.o.s., measurement of the close-to-carrier f.m. noise of pulsed, primed by an external oscillator. B.A.Prew 344
Input correlation with the a.s.w. storage correlator. P.Borden and G.S.Kino 470
'Instant' Fourier transform. J.E.Gibbs 122
Instantaneous change in current gain produced by burst noise in a planar transistor. K.F.Knott 467
Integral-equation approach to the abrupt-depletion approximation in semiconductor components. P.De Visschere and G.De Mey 104
Integrated circuits, millimetre-wave, notch-front diodes for. M.V.Schneider and E.R.Carlson 745
Integrator, novel c.c.d. signal. C.P.Traynar, P.C.T.Roberts, G.G.Bloodworth and R.G.Taylor 456
Intensity modulation of light transmitted in curved optical fibres. R.A.Sammut 545
Intentional side etching to achieve low-noise GaAs f.e.t.. F.Murai, H.Kurono and H.Kodera 316
Interconnected subsystems, solution of. I.N.Hajj 78
Interdiffusion effects of heat treatment on $Ga_xIn_{1-x}Sb$ diodes metallised with gold. J.M.Peransin and E.Groubert 715
Interesting microwave filtering properties of C-section periodic structure. R.Crampagne and M.Ahmadpanah 199
Interface-recombination-controlled minority-carrier lifetime in n-type GaP. I.D.Blenkinsop, W.R.Harding and D.R.Wight 14
Interfaces, microprocessor. D.Zissos and F.G.Duncan Errata 35
Interference error bounds, intersymbol-, for hard-limited satellite channels. M.Ekanayake and D.P.Taylor 498
Interference-pattern technique, antenna measurements of an intermediate distance range by using an. K.M.Keen 375
Interference patterns from very thick samples for determining the profile of graded-index fibres. A.Nicia 309
Interference-rejection filter using charge-coupled devices. J.Carver and G.S.Hobson 732
Interferometer, asymmetric 2-Josephson-junction, as a logic gate. H.Beha 218
Intermediate ternary code: A redundancy-reducing runlength code for digital facsimile transmission. U.Rothgirdt and G.Renelt 749
Intermodulation distortion, method for measuring 34d-order in GaAs f.e.t.s.. C.Rauscher and R.S.Tucker 701
Intermodulation-distortion properties, 3rd-order, modelling the, of a GaAs f.e.t.. R.S.Tucker and C.Rauscher 508
Intersymbol-interference error bounds for hard-limited satellite channels. M.Ekanayake and D.P.Taylor 498
Intracell c.c.d. programmable correlator. N.E.Evans and H.S.Gamble 69
Intrinsic response time and related quantities describing semiconductor avalanches. B.B.Van Iperen and J.J.Goedbloed 448
Inverse active networks. T.S.Rathore 303
Inverse optimal control problem for linear discrete-time systems. J.Willems and H.Van de Voorde 493
Inverters n-m.o.s. and p-m.o.s. integrated, technique for increasing the gain bandwidth products of. Y.P.Tsividis Errata 591

Ion-implanted silicon, structural and electrical profiles for double damage layers in. D.K.Sadana, J.Fletcher and G.R.Booker 632
Irradiation, ionising, change of some properties of junction field-effect transistors after. G.Dehmel and D.Braunig 601

J

Junction field-effect transistors, change of some properties of, after ionising irradiation. G.Dehmel and D.Braunig 601
Junction roughness, influence of, on solar-cell characteristics. G.De Mey, B.Jacobs and F.Fransen 657
Junctions, silicon p-n, theory of depletion-layer recombination in. P.J.Anderson and M.J.Buckingham 496

K

K-Band f.e.t. amplifiers. M.M.Nowak, P.A.Terzian and R.D.Fairman 159

L

L.E.D. design for fibre systems. D.Gloge 399
L.E.D.S, $GaAs_{0.6}P_{0.4}$, deep-level changes associated with the degradation of. C.Lopez, A.Garcia and E.Munoz 460
L.E.D.S., material-dispersion-limited operation of high-bit-rate optical-fibre data links using. W.M.Muska, Tingye Li,, T.P.Lee and A.G.Dentai 605
L.E.D.S, small-area, high-radiance c.w. InGaAsP, emitting at 1.2 to 1.3 μm. A.G.Dentai, T.P.Lee, C.A.Burrus and E.Buehler 484
L.P.E. layers, InP, very-high-purity. K.T.Ip, L.F.Eastman and V.L.Wrick 682
Langmuir-film, measurement of, properties by optical waveguide probe. L.M.Walpita and C.W.Pitt 210
Large-core high-n.a. fibres for data-link applications. P.B.O'Connor, J.B.Macchesney and C.M.Melliar-Smith 170
Large linear area light-spot-position-sensitive photodiode. J.Fieret, A.Kwakernaak and S.Middelhoek 422
Large-time-bandwidth-product correlation and holographic storage with an s.a.w. storage correlator. H.C.Tuan and G.S.Kino 709
Laser excited photoconductivity, diffusion-controlled decay of, in optoelectronic switches. W.Platte 321
Laser-induced damage in crystalline quartz, correlation bwtween stimulated scattering processes and. C.Yu, M.F.Haw and H.Hsu 240
Laser modulation, injection, high-bit-rate pulse regeneration, and using a diode circuit. U.Wellens 529
Laser-to-fibre, high efficiency, coupling circuit using a combination of a cylindrical lens and a selfoc lens. Y.Odagiri, M.Shikada and K.Kobayashi 395
Laser, tunable Raman fibre-optic. D.C.Johnson, K.O.Hill, B.S.Kawasaki and D.Kato 53
Lasers, c.w. (GaAl)As d.h., low-frequency intensity noise in, with stripe geometry. R.Lang, K.Minemura and K.Kobayashi 228
Lasers, continuous-wave semiconductor, 1/f noise of. G.Tenchio 614
Lasers, GaAs, transverse light coupling from, into optical fibres. C.C.Timmermann 766
Lasers, grating-coupled GaAs-GaAlAs, with distributed Bragg reflectors. Y.Uematsu, M.Yamamoto and Y.Unno 759
Lasers, InGaAsP/InP double-heterostructure, fast pulse behaviour of, emitting at 1.27 μm. T.Yamamoto, K.Sakai, S.Akiba and Y.Suematsu 143
Lasers, stripe-geometry d.h., with linear output-current characteristics. P.J.De Waard 400
Lasers, stripe-geometry, longitudinal field control in. M.J.Adams 236
Layers, InP l.e.p., very-high-purity. K.T.Ip, L.F.Eastman and V.L.Wrick 682
Leakage current enhancement in impatt oscillators by photoexcitation. H.P.Vyas, R.J.Gutmann and J.M.Borrego 189
Leakage factor and burst noise in transistor arrays. K.F.Knott 523
Learning networks, digital, improved Hamming-distance analysis for. T.J.Stonham 155
Least-squares time-domain deconvolution for transversal-filter equalisers. D.Preis 356
Levitator, magnetic, stabilising circuit for a tuned-circuit. M.R.Button and P.N.Murgatroyd 477
Lifetime measurements, optical silicon, in heavily doped diffused regions. S.G.Chamberlain, D.J.Roulston and S.P.Desai 544
Light-controlled semiconductor waveguide antenna. R.Karg and E.Kreutzer 246
Limit cycles and reduced models in nonlinear systems, describing functions. S.K.Woon and H.Nicholson 185
Limiters, waveguide, subsidiary resonance, suppression of higher-order. E.Davidson and I.Helszajn 585
Linear discrete-time systems, inverse optimal control problem for. J.Willems and H.Van de Voorde 493
Linearisation of optical transmitters by a quasi-feedforward compensation technique. J.Straus and O.I.Szentesi 158
Links, high-bit-rate optical-fibre data, material-dispersion-limited operation of, using l.e.d.s.. W.M.Muska, Tingye Li,, T.P.Lee and A.G.Dentai 605
Links, microwave satellite, phase of crosspolarised signals on. N.J.McEwan 489
Liquid-crystal, c.c.d.-addressed, displays. S.D.Brotherton, A.Gill and M.J.King 270
Liquid-nitrogen-cooled submillimetre-wave silicon impatt diodes. T.Ishibashi, M.Ino, T.Makimura and M.Ohmori 299
Lithium-tantalate thickness-mode resonators, overtone, zero temperature coefficients in. J.Detaint 20 Errata 336
Loaded-, dielectric-ring-, waveguide feed. A.Kumar and G.A.Hockham 436
Local-oscillator-induced noise in GaAs Schottky mixer diodes. R.J.Mattauch and F.S.Fei 22
Logic array, modified programmable, with more product terms. L.A.M.Bennett 443
Logic circuit, femtojoule, using normally-off GaAs m.e.s.f.e.t.s.. G.Bert, G.Nuzillat and C.Arnodo 644
Logic-circuit synthesis, algorithms for, by using multiplexers. D.G.Whitehead 355
Logic gate, asymmetric 2-Josephson-junction interferometer as a. H.Beha 218
Logic,-integrated-injection, multivalued, ($M1^2L$) full adder. N.Friedman, C.A.T.Salama, F.E.Holmes and P.M.Thompson 135
Logic, low-power high-speed, f.e.t., low-temperature, for. H.Rees, G.S.Sanghera and R.A.Warriner 156
Logic systems, new gate model for the transient analysis of. R.Murray-Shelley and P.L.Arlett 639
Logic, test, adaptively designed, for digital circuirs. I.Aleksander and Z.Al-Bandar 466
Longitudinal field control in stripe-geometry lasers. M.J.Adams 236
Loss in gain and boresight crosspolarisation in reflector antennas with surface errors. S.I.Ghobrial 623
Loss testing, pulse echo return, of telecommunication coaxial cables, wideband equalisation and signal averaging applied to the. P.Cochrane and J.K.Perkins 481
Low-frequency behaviour of the Beverage aerial. P.Knight 21
Low-frequency intensity noise in c.w. (GaAl)As d.h. lasers with stripe geometry. R.Lang, K.Minemura and K.Kobayashi 228
Low-frequency multiplication noise in reference diodes for small multiplication factors. M.M.Jevtic and D.A.Tjapkin 468
Low-frequency stability of impatt-diode circuits. M.G.Reggiani 82
Low-loss compound-glass optical fibre. K.J.Beales, C.R.Day, W.J.Duncan and G.R.Newns 755
Low-loss fibre prepared under high deposition rate by modified c.v.d. technique. K.Yoshida, Y.Furui, S.Sentsui and T.Kuroha 608
Low-loss propagation in the dipole-mode along a coaxial waveguide. H.M.Barlow 108
Low-loss single-mode fibre at the material-dispersion-free wavelength of 1.27 μm. M.Kawachi, A.Kawana and T.Miyashita 442
Low-loss splices for single-mode fibres. A.R.Tynes and R.M.Derosier 673
Low temperature f.e.t. for low-power high-speed logic. H.Rees, G.S.Sanghera and R.A.Warriner 156
Lower bound on the size of a 3-stage wide-sense nonblocking network. D.G.Smith 215
Lowpass network RC, active distributed, design of an. G.H.Tomlinson and L.Unsworth 575

M

M.E.S.F.E.T.-amplifier, GaAs-, gain performance, effects of microstrip discontinuities. R.J.Akello, B.Easter and I.M.Stephenson 160
M.E.S.F.E.T., GaAs, simplified, model to 10GHz. R.A.Minasian 549
M.E.S.F.E.T. oscillators, GaAs, performance of, in the frequency range 8-25 GHz. H.Q.Tserng, H.M.Macksey and V.Sokolov 85
M.E.S.F.E.T.S., GaAs, avalanche noise in. C.Tsironis and H.Beneking 438
M.E.S.F.E.T.S., normally-off GaAs, femtojoule logic circuit using. G.Bert, G.Nuzillat and C.Arnodo 644
M.I.S. and Schottky slow-wave coplanar striplines on GaAs substrates. H.Hasegawa and H.Okizaki 663
M.O.S. capacitor measurements, correlation of pulsed, with oxidation induced defects. T.F.Unter, P.C.T.Roberts and Lamb. D.R. 93
M.O.S.F.E.T., GaAs, enhancement-mode, on semi-insulating substrate using a self-aligned gate technique. E.Kohn and A.Colquhoun 73 Errata 168
M.O.S. structure, resistive-gate, model for charge propagation in a. R.M.Barsan 475
Magnetic levitator, stabilising circuit for a tuned-circuit. M.R.Button and P.N.Murgatroyd 477
Magnetic recorders, analogue, phase equalisation of, by transversal filtering. D.Preis 127
Magnetic recording, analogue, Hilbert-transformer side-chain phase equaliser for. D.Preis 616
Magnetic suspension, novel position sensor for. J.W.Finch and M.J.Crawford 735
Magnetoelastic effect, surface-acoustic-wave oscillator tuned by. G.Volluet 588
Magnetostatic amplifier:, thin-film, analytical expressions of dispersion and gain properties. M.Bini, L.Millanta and N.Rubino 114
Magnetostatic-surface-wave microstrip transducer, multibar, bandpass filtering with. H.J.Wu, C.V.Smith,Jr., J.H.Collins and J.M.Owens 610
Magnetostatic-surface-wave microstrip transducers, multibar, bandpass filtering with. H.J.Wu, C.N.Smith,Jr., J.H.Collins and J.M.Owens 610
Material-dispersion-limited operation of high-bit-rate optical-fibre data links using l.e.d.s.. W.M.Muska, Tingye Li,, T.P.Lee and A.G.Dentai 605
Matrix description of scattering problems. R.J.Chignell and D.Munro 353
Matrix formulation of corrugated feeds by using impedance boundary conditions. L.Shafai and J.E.Hansen Errata 491
Matrix, null return-difference, determinant of the. Wai-Kai Chen 306
Maximally flat approximation of lowpass RC active filters with multiple real pole. M.Biey and A.Premoli 76
Maximum information capacity of fibre-optic waveguides. F.P.Kapron 96 Errata 272
Measurement, amplitude, novel method for, of signals up to microwave frequencies. B.Gilbert 107
Measurement, automated, of noisy voltages with a present confidence level. P.I.Somlo 234
Measurement of baseband frequency response of multimode fibre by using a new type of mode scrambler. M.Tokuda, S.Seikai, K.Yoshida and N.Uchida 146
Measurement of field strength for mobile services at v.h.f. and u.h.f. for the city of Melbourne. J.Steel and R.A.Court 710
Measurement of Langmuir-film properties by optical waveguide probe. L.M.Walpita and C.W.Pitt 210
Measurement of normalised frequency in single-mode optical fibres. W.A.Gambling, D.N.Payne, H.Matsumura and S.R.Norman 133
Measurement of profile dispersion in optical fibres: a direct technique. F.M.E.Sladen, D.N.Payne and M.J.Adams 212
Measurement of the effective relative permittivity of unshielded coplanar waveguides. E.Muelier 729
Measurement of the electron accumulation on two Schottky diodes connected metal to metal. N.Hashizume, S.Kataoka and K.Tomizawa 495
Measurement technique, through pulse, for assessing the forward echo performance of coaxial cables. P.Cochrane 02
Measurements, high-sensitivity dielectric loss, by using super-conducting microwave resonators in an oscillator loop. W.Meyer 07
Measurements, high-stress and high-field, 3-level conduction-band structure of GaAs from. A.R.Adams, P.J.Vinson, C.Pickering, G.D.Pitt and W.Fawcett 46
Measurements of depolarisation and attenuation at 11.7 GHz by using the communications technology satellite. W.L.Nowland, J.I.Strickland, J.Schlesak and R.L.Olsen 750
Measurements of the close-to-carrier f.m. noise of pulsed InP t.e.o.s. primed by an external oscillator. B.A.Prew 344
Medium-numerical-aperture low-pulse-dispersion fibre. J.P.Hazan, J.J.Bernard and D.Kuppers 540
Melt splice of multimode optical fibre with an electric arc. M.Hirai and N.Uchida 123
Memory device, Gunn-effect, using the charge accumulation on a Schottky-trigger electrode. N.Hashizume and S.Kataoka 60
Metallised with gold, interdiffusion effects of heat treatment on $Ga_xIn_{1-x}Sb$ diodes. J.M.Peransin and E.Groubert 715
Method for designing stable 2-d digital filters. K.P.Prasad and P.S.Reddy 385
Method for measuring 3rd-order intermodulation distortion in GaAs f.e.t.s.. C.Rauscher and R.S.Tucker 701
Method of data reduction of sampled speech signals by using nonuniform sampling and a time-variable digital filter. T.Fjallbrant 334

Method of obtaining accurate transistor data for the evaluation of computer models. A.Stevenson 436
Method of obtaining radiowave propagation parameters for the Earth-ionosphere duct at e.l.f.. M.Ishaq and D.Llanwyn Jones 254
Microbending loss of multimode square-law fibres: A ray theory. M.Rousseau and J.Arnaud 265 Errata 336
Microbending losses, pulse response and, of an optical glass-fibre waveguide with a bump in its index profile. W.Eickhoff and O.Krumpholz 256
Microprocessor interfaces. D.Zissos and F.G.Duncan Errata 35
Microscope, scanning acoustic, image enhancement in the, using analogue filters. H.K.Wickramasinghe and J.Heiserman 776
Microstrip balun, broadband, optimum design for a. D.M.L.Bartholomew 510
Microstrip bandstop filter, novel. R.E.Pearson 561
Microstrip, coaxial-to-, connector, equivalent circuit of, over the 8-12 GHz range. S.O.Ajose and N.A.Mathews 465
Microstrip discontinuities on GaAs-m.e.s.f.e.t.-amplifier gain performance, effects of performance, effects of. R.J.Akello, B.Easter and I.M.Stephenson 160
Microstrip, ferrite, dispersion characteristics of a, by a transverse-mode-matching technique. N.Krause Errata 120
Microstrip lines, anisotropic, simple analysis of, by a transform method. B.T.Szentkuti Errata 92
Microstrip lines, calculation of inhomogeneous. W.Menzel 183
Microstrip optoelectronic switch, theoretical model for a. A.Meriau, R.Castagne, R.Laval and S.Laval 245
Microstrip transducers, multibar magnetostatic-surface-wave, bandpass filtering with. H.J.Wu, C.N.Smith,Jr., J.H.Collins and J.M.Owens 610
Microstrip, waveguide-to-, transitions, design of, specially suited to millimetre-wave applications. L.J.lavedan 604
Microwave amplifier, novel optimisation procedure applied to the minimisation of the ripple of a. A.Benasson, A.Rabier and P.Harrop 685
Microwave capability of 1.5 μm-gate GaAs m.o.s.f.e.t.. H.Tokuda, Y.Adachi and T.Ikoma 761
Microwave filter, constant-impedance bandpass, new type of, based on the commutating principle. B.F.Nicholson, B.K.Watson and C.S.Barham 535
Microwave filtering, interesting, properties of C-section periodic structure. R.Crampagne and M.Ahmadpanah 199
Microwave frequencies, nonlinear effects in coaxial cables at. M.B.Amin and F.A.Benson 768
Microwave frequencies, novel method for amplitude measurement of signals up to. B.Gilbert 107
Microwave GaAs f.e.t. amplifiers, noise performance of, at low temperatures. R.E.Miller, T.G.Phillips, D.E.Iglesias and R.H.Knerr 10
Microwave GaAs f.e.t., modelling of, in common-gate operation. J.Zapata-Ferrer and B.Loriou 106
Microwave imaging of subsurface cylindrical scatters from crosspolar backscatter. A.P.Anderson and P.J.Richards 617
Microwave modulation by amorphous-semiconductor switches. D.N.Bose and B.J.Jani 451
Microwave oscillators, network analysis of, using microstrip transmission lines. C.M.Krowne 115
Microwave-radio-link planning, variability of atmospheric water-vapour concentration and its implications for. M.P.M.Hall 650
Microwave resonators, super-conducting, high-sensitivity dielectric loss measurements by using, in an oscillator loop. W.Meyer 07
Microwave satellite links, phase of crosspolarised signals on. N.J.McEwan 489
Microwave satellite paths, crosspolarisation phase due to ice crystals on. B.G.Evans and A.R.Holt 664
Microwave slant-path attenuation, prediction of, from point rainfall-rate measurements. J.E.Allnutt 376
Millimetre-wave s.s.b. mixer with integrated local-oscillator injection. B.Vowinkel and W.Reinert 226
Mines, deep-level gold, transmission of radio signals in, indirectly via power cables. B.A.Austin and I.Kerdic 462
Minority-carrier lifetime, interface-recombination-controlled, in n-type GaP. I.D.Blenkinsop, W.R.Harding and D.R.Wight 14
Misawa diodes, small-signal properties of, influence of diffusion on the. R.Schawarz, H.W.Thim and H.W.Potzl 288
Mixed method of aggregation and i.s.e. criterion approaches for system reduction. H.Inooka and G.Obinata 88
Mixer, millimetre-wave s.s.b., with integrated local-oscillator injection. B.Vowinkel and W.Reinert 226
Mixer, Schottky, diodes made by a new method. J.Lacombe, J.P.Duchemin, M.Bonnet and D.Huyghe 472
Mobile services, measurement of field strength for, at v.h.f. and u.h.f. for the city of Melbourne. J.Steel and R.A.Court 710
Mobility, effective, effect of the reverse bias between channel and substrate on the, of electrons in a Ge i.g.f.e.t.. K.Zo Don, I.G.Neizvestny and V.N.Ovsuyk 624
Mode propagation, modified, in optical waveguides. C.W.Pitt and L.M.Walpita 347
Mode shift at bends in single-mode fibres. W.A.Gambling, H.Matsumura and R.A.Sammut 695
Model for charge propagation in a resistive-gate m.o.s. structure. R.M.Barsan 475
Model for the effect of electric fields on satellite-earth microwave radio propagation. D.P.Haworth, P.A.Watson and N.J.McEwan 562
Model for the excitation of 1/f noise by high-frequency a.c. signals. G.J.M.Helvoort,van and H.G.E.Beck 542
Model, Wiener, identification of nonlinear systems using the. S.A.Billings and S.Y.Fakhouri 502
Modelling of Gunn-domain effects in GaAs m.e.s.f.e.t.s.. H.A.Willing and P.de Santis 537
Modelling of microwave GaAs f.e.t. in common-gate operation. J.Zapata-Ferrer and B.Loriou 106
Modelling technique for an f.e.t. chip. S.O.Ajose and N.A.Mathews 511
Modelling the 3rd-order intermodulation-distortion properties of a GaAs f.e.t.. R.S.Tucker and C.Rauscher 508
Models, computer, method of obtaining accurate transistor data for the evaluation of. A.Stevenson 436
Models, large-signal, improving the, of bipolar transistors by dividing the intrinsic base into two lateral sections. H.-M.Rein 40 Errata 168
Models, reduced, describing functions, limit cycles and, in nonlinear systems. S.K.Woon and H.Nicholson 185
Modes in curved step-index optical fibres. W.A.Gambling and H.Matsumura 532
Modes in s.a.w. grating resonators. H.A.Haus 12
Modified mode propagation in optical waveguides. C.W.Pitt and L.M.Walpita 347
Modified programmable logic array with more product terms. L.A.M.Bennett 443
Modulation characteristics of double heterostructure superluminescent diodes. W.Harth and M.C.Amann 291
Modulation, efficient intensity, in a Ti-diffused $LiNbO_3$ branched optical waveguide device. H.Sasaki 693
Modulation, injection laser, high-bit-rate pulse regeneration and, using a diode circuit. U.Wellens 529
Modulation, l.e.d. direct, nonlinear phase distortion and its compensation in. K.Asatani and T.Kimura 162
Modulation, microwave, by amorphous-semiconductor switches. D.N.Bose and B.J.Jani 451
Modulation technique, phase-shift, for the linearisation of analogue optical transmitters. J.Straus, A.J.Springthorpe and O.I.Szentesi 149
Monolithic, programmable analogue c.c.d. transversal filter. P.B.Denyer, J.W.Arthur and J.Mavor 739
MUCROER polynomials in passive-filter design. M.Biey 730
Multifrequency tone detection by zero-interval analysis. C.S.A.Smith 03
Multimode fibre, measurement of baseband frequency response of, by using a new type of mode scrambler. M.Tokuda, S.Seikai, K.Yoshida and N.Uchida 146
Multiplexer at 5 Gbit/s for fibre-optical communication systems. R.Tell, P.Torphammar and S.T.Eng 765
Multipliers for residue-number-arithmetic digital filters. M.A.Soderstrand and E.L.Fields 164
Multivalued integrated-injection-logic ($M1^2L$) full adder. N.Friedman, C.A.T.Salama, F.E.Holmes and P.M.Thompson 135
Multivariable contonuous-time systems, linear, transmission zeros of. B.Porter and J.J.D'Azzo 753
Multivariable linear systems, static decoupling of, with slow and fast modes. B.Porter 23
Multivariable regulators, receding-horizon approach to the synthesis of nonlinear. Y.Thomas, D.Sarlat and L.Shaw 329
Multivariable systems, computing the invariant zeros of. Y.Shamash 722
Music, efficient pitch estimation for speech and. W.H.Tucker and R.H.T.Bates 357

N

n-way r.f. power splitters. E.Rotholz 610
Necessary conditions for stabilisation and pole placement with output feedback. M.Tarokh 148
Necessary conditions for stabilisation and pole placement with output feedback. M.Tarokh 148
Necessary criteria for the diagnosis of panel misalignments in large reflector antennas by microwave metrology. J.C.Bennett and M.P.Godwin 463
Negative current-mirror using n-p-n transistors. W.J.Barker and B.L.Hart 311
Negative resistance and c.w. oscillation of the transit-time transistor. G.Salmer, Y.Crosnier, Y.Druelle and M.Armand 100
Network, 3-stage wide-sense nonblocking, lower bound on the size of a. D.G.Smith 215
Network, active distributed RC lowpass, design of an. G.H.Tomlinson and L.Unsworth 575
Network analysis of microwave oscillators using microstrip transmission lines. C.M.Krowne 115
Network, new active quadrature phase-shift. J.Haine 216
Network realisation, unified active structure for an arbitrary 2-port. C.Andrzej, F.Stefan and O.Stanislaw Errata 491
Networks, digital, learning, improved Hamming-distance analysis for. T.J.Stonham 155
Neuristor line section, single inductorless, utilisation of a, as a voltage-to-frequency convertor. Z.Czarnul and M.Bialko 251
New 1024-element charge-coupled linear image sensor with high sensitivity. N.Suzuki 716
New acoustic-surface-wave zero-temperature cuts in Tl_3VS_4. J.Henaff 300
New acoustic-surface-wave zero-temperature cuts in Tl_3TaSe_4. J.Henaff and M.Feldmann 661
New active quadrature phase-shift network. J.Haine 216
New avalanche-injection-controlled switch. F.P.Califano, A.Caruso, P.Spirito and G.F.Vitale 196
New c.c.d. programmable transversal filter. B.E.Burke and W.T.Lindley 521
New codes for digital transmission. D.Munoz-Rodriguez and K.W.Cattermole 340
New correlation identities for periodic sequences. D.V.Sarwate and M.B.Pursley 48
New family of bulk-acoustic-wave devices employing interdigital transducers. T.I.Browning and M.F.Lewis 128
New form of digital wattmeter using a double-dual-slope principle. J.R.Stockton 406
New gate model for the transient analysis of logic systems. R.Murray-Shelley and P.L.Arlett 639
New method for generating precise triangular waves and square waves. B.Z.Kaplan and Y.Tatrash 71
New multifunction biquadratic filter circuit with inherently stable Q-factor. L.Brown and A.S.Sedra 719
New phase-sensitive rectifier circuit. S.F.Carter and E.A.Faulkner 439
New principle to measure loss and mode-conversion parameters of multimode fibres. S.Kawakami 706
New simplification criterion relating different reduction algorithms. B.Maione and F.Torelli 238
New synthesis cycle for LC impedances. D.M.Cuong and M.Hasler 630
New television test waveform. J.E.Holder 264
New type of constant-impedance bandpass microwave filter based on the commutating principle. B.F.Nicholson, B.K.Watson and C.S.Barham 535
New type of varactor diode having strongly nonlinear C/V characteristics. S.Shirota, Y.Togawa and S.Kaneda 360
New v-groove integrated injection logic. S-Y.Yu 382
New voltage-to-frequency convertor with nonlinearity correction. P.Bosnjakovic and J.Kon 05
Noise, 1/f, model for the excitation of, by high-frequency a.c. signals. G.J.M.Helvoort,van and H.G.E.Beck 542
Noise, 1/f, of continuous-wave semiconductor lasers. G.Tenchio 614
Noise analysis, referred impedance, for feedback amplifiers. J.L.Hullett and T.V.Muoi 387
Noise, atmospheric, error probabilities due to, in practical m-c.p.s.k. and ideal f.s.k. receivers. I.M.Kostic 284
Noise, avalanche, in GaAs m.e.s.f.e.t.s.. C.Tsironis and H.Beneking 438
Noise, burst, instantaneous change in current gain by, in a planar transistor. K.F.Knott 467
Noise, burst, leakage factor and, in transistor arrays. K.F.Knott 523
Noise, coherent, evidence for, in pumped Schottky-diode mixers. N.J.Keen 282
Noise, current-kink, of n-channel enhancement e.s.f.i.-m.o.s. s.o.s. transistors. W.Fichtner and E.Hochmair 675
Noise, low-frequency intensity, in c.w. (GaAl)As d.h. lasers with stripe geometry. R.Lang, K.Minemura and K.Kobayashi 228
Noise, low frequency multiplication, in reference diodes for small multiplication factors. M.M.Jevtic and D.A.Tjapkin 468

Noise performance of microwave GaAs f.e.t. amplifiers at low temperatures. R.E.Miller, T.G.Phillips, D.E.Iglesias and R.H.Knerr 10
Noise, random, subjective data for, measured through the new CMTT unified weighting network for television. G.M.Reid 551
Noise resistors, spectra of a.c.-induced. H.Sutcliffe and Y.Ulgen 397
Noise, simulated 1/f, variance of. A.Ambrozy 224
Noise, variance. A.Ambrozy 137
Noise voltages, automated measurement of, with a present confidence level. P.I.Somlo 234
Nondestructive measurement of index profile of an optical-fibre preform. P.L.Chu 736
Nonlinear effects in coaxial cables at microwave frequencies. M.B.Amin and F.A.Benson 768
Nonlinear phase distortion and its compensation in l.e.d. direct modulation. K.Asatani and T.Kimura 162
Nonlinear profile dispersion aids optimisation of graded-index fibres. S.Geckeler 440
Nonlinear systems, identification of, using the Wiener model. S.A.Billings and S.Y.Fakhouri 502
Nonlinear systems, in, describing functions, limit cycles and reduced models. S.K.Woon and H.Nicholson 185
Nonlinear theory of long-range-interaction resonant generators. A.A.Shmat'ko, O.A.Tretikov and D.M.Vavriv 480
Normally-off $Al_{0.5}Ga_{0.5}As$ heterojunction-gate GaAs f.e.t.. H.Morkoc, S.G.Bandy, G.A.Antypas and R.Sankaran 747
Notch-front diodes for millimetre-wave integrated circuits. M.V.Schneider and E.R.Carlson 745
Novel c.c.d. signal integrator. C.P.Traynar, P.C.T.Roberts, G.G.Bloodworth and R.G.Taylor 456
Novel linear regression analyser using analogue c.c.d.. J.W.Arthur, C.F.N.Cowan and J.Mavor 751
Novel method for amplitude measurement of signals up to microwave frequencies. B.Gilbert 107
Novel method of diameter control in optical-fibre drawing process. K.Imoto, S.Aoki and M.Sumi 726
Novel microstrip bandstop filter. R.E.Pearson 561
Novel optimisation procedure applied to the minimisation of the ripple of a microwave amplifier. A.Benasson, A.Rabier and P.Harrop 685
Novel position sensor for magnetic suspension. J.W.Finch and M.J.Crawford 735
Novel technique for the measurement of the differential mode attenuation in graded-index fibres. M.Eve 744
Novel variable-focus ultrasonic transducer. S.D.Bennett and J.Chambers 110
Null steering in linear arrays by using amplitude control of signals in the feeder network. D.S.Hicks 198
Number-theoretic-transforms, Winograd's algorithm applied to. D.Bailey 548
Numerical algorithm, fast, for the recompression of dispersed time signals. A.K.Booer, J.Chambers and I.M.Mason 453
Numerical analysis of small practical feed elements in a ground plane. P.Balling and J.Jacobsen 717
Numerical holographic reconstruction by a 'projective transform'. A.K.Booer, J.Chambers and I.M.Mason 569
Numerical instabilities of the moment method in waveguide calculations. F.E.Gardiol and P.Haldemann 694
Nylon-jacketed optical fibre with silicone buffer layer. T.Naruse, Y.Sugawara and K.Masuno 153

O

Observability, controllability and, of composite systems. N.K.Sinha and H.El-Sherief 409
Observation of millimetre-wave amplitude scintillations in a town environment. N.D.Mavrokoukoulakis, K.L.Ho and R.S.Cole 391
Observations of high-field domains in $Ga_xIn_{1-x}Sb$ Gunn diodes. M.Kawashima, K.Ohta and S.Kataoka 379
Observed behaviour of high-efficiency impatt diodes over a 30% frequency range. P.W.Huish 178
Octave-band GaAs f.e.t. y.i.g.-tuned oscillators. R.J.Trew 629
OH-ion distribution profiles in rod preforms of high-silica optical waveguide. M.Kawachi, M.Horiguchi, A.Kawana and T.Miyashita 247
Ohmic contacts, radiation-induced degradation of. R.Blundell, D.V.Morgan and M.J.Howes 483
On/off controllers, determination of P and D parameters of. E.M.Stafford 429
Op-amp, 3-, instrumentation amplifier, C.M.R.R. analysis of the. M.A.Smither, D.R.Pugh and L.M.Woolard,Jun. 594
Operational amplifiers, schemes for increased output-voltage swing from. P.Garde 111
Optic, -fibre, laser, tunable Raman. D.C.Johnson, K.O.Hill, B.S.Kawasaki and D.Kato 53
Optic,-fibre, waveguides, maximum information capacity of. F.P.Kapron 96 Errata 272
Optical absorption characteristics of hydroxyl radicals in phosphorus-containing silica glass. Y.Mita, S.Matsushita, T.Yanase and H.Nomura 55
Optical, analogue, transmitters, phase-shift modulation technique for the linearisation of. J.Straus, A.J.Springthorpe and O.I.Szentesi 149
Optical detector, high-speed, a GaAs m.e.s.f.e.t.:. C.Baack, G.Elze and G.Walf 193
Optical-fibre attenuation, continuous measurement of, during manufacture. G.J.Cannell 125
Optical-fibre communications, double epitaxial silicon avalanche photodiodes for. K.Nishida, K.Ishii, K.Minemura and K.Taguchi 280
Optical-fibre connectors, retention grooves for. K.Hollerl, J.Thurnbeck and L.Reiter 74
Optical-fibre data links, high-bit-rate, material-dispersion-limited operation of, using l.e.d.s.. W.M.Muska, Tingye Li,, T.P.Lee and A.G.Dentai 605
Optical-fibre drawing process, novel method of diameter control in. K.Imoto, S.Aoki and M.Sumi 726
Optical-fibre end, hand-held tool for, preparation. J.E.Fulenwider and M.L.Dakss 578
Optical fibre, low-loss compound-glass. K.J.Beales, C.R.Day, W.J.Duncan and G.R.Newns 755
Optical fibre, monomode, radiation characteristics of a step discontinuity in a. D.Opielka 319
Optical fibre, multimode, melt splice of, with an electric arc. M.Hirai and N.Uchida 123
Optical fibre, multimode, power loss caused by random mode coupling in a. K.Tatekura, K.Itoh and T.Matsumoto 767
Optical fibre, nylon-jacketed, with silicone buffer layer. T.Naruse, Y.Sugawara and K.Masuno 153
Optical-fibre preform, nondestructive measurement of index profile of an. P.L.Chu 736
Optical-fibre transmission experiments, 100 Mb/s 12 km and 400 Mb/s 8 km. S.Sugimoto, K.Minemura, T.Yanase, Y.Odagiri and R.Ishikawa 635
Optical-fibre transmission system, 140 Mbit/s experimental, preliminary test results on a. R.W.Berry, R.C.Hooper and B.R.White 358
Optical fibre, unclad elliptical, determination of refractive index and ellipticity of an. P.L.Chu, C.Saekeang and Y.M.Chow 41
Optical-fibre waveguides, acoustic sensitivity of. B.Culshaw, D.E.N.Davies and S.A.Kingsley 760
Optical fibres, curved step-index, modes in. W.A.Gambling and H.Matsumura 532
Optical fibres, cutting, with a hot wire. G.D.Khoe and G.Kuyt 147
Optical fibres, determination of the wavelength of zero material dispersion in, by pulse-delay measurements. D.N.Payne and A.H.Hartog 627
Optical fibres, intensity modulation of light transmitted in curved. R.A.Sammut 545
Optical fibres:, measurement of profile dispersion in, a direct technique. F.M.E.Sladen, D.N.Payne and M.J.Adams 212
Optical fibres, near-square-law, uncertainties of the leaky mode correction for. K.Petermann 513
Optical fibres, phosphorus-doped low-loss, coloration and its reduction in. R.Yamauchi, T.Kobayashi, T.Arai and K.Inada 461
Optical fibres, pulse compression in. J.V.Wright and B.P.Nelson 361
Optical fibres, single-mode, measurement of normalised frequency in. W.A.Gambling, D.N.Payne, H.Matsumura and S.R.Norman 133
Optical fibres, spark-induced fracture of. P.Hensel 603
Optical fibres, transverse light coupling from GaAs lasers into. C.C.Timmermann 766
Optical fibres, triple-ball connector for. P.Hensel 734
Optical glass-fibre waveguide, pulse response and microbending losses of an, with a bump in its index profile. W.Eickhoff and O.Krumpholz 256
Optical isolator, compact for near-infrared radiation. A.Shibukawa, A.Katsui, H.Iwamura and S.Hayashi 721
Optical preamplifiers, high-speed. J.L.Hullett, T.V.Muoi and S.Moustakas 688
Optical route, statistical model for the prediction of the bandwidth of an. M.Eve Errata 591
Optical silicon lifetime measurements in heavily doped diffused regions. S.G.Chamberlain, D.J.Roulston and S.P.Desai 544
Optical transmission experiment at 1.12 Gbit/s using a graded-index fibre with a length of 1.652 kM. C.Baack, G.Elze, G.Walf, G.Gliemeroth, D.Krause and N.Neuroth 452
Optical transmitters, linearisation of, by a quasi-feedforward compensation technique. J.Straus and O.I.Szentesi 158
Optical waveguide device, efficient intensity modulation in a Ti-diffused $LiNbO_3$ branched. H.Sasaki 693
Optical waveguide, high-silica, OH-ion distribution profiles in rod preforms of. M.Kawachi, M.Horiguchi, A.Kawana and T.Miyashita 247
Optical-waveguide, numerical computations of, transmission parameters, comparison of. J.M.Arnold, G.A.E.Crone and P.J.B.Clarricoats 273
Optical waveguide probe, measurement of Langmuir-film properties by. L.M.Walpita and C.W.Pitt 210
Optical-waveguide transmission parameters, stratification methods in the numerical analysis of. J.M.Arnold 680
Optical waveguides, highly multimode, fast fabrication method for thick and. G.H.Chartier, P.Jaussaud, A.D.de Oliveira and O.Parriaux 763
Optical waveguides, modified mode propagation in. C.W.Pitt and L.M.Walpita 347
Optical waveguides, stress-induced (embossed), refractive-index profiles of. P.V.H.Sabine 51
Optical waveguides, trapezoidal-cross-section ridge, propagation characteristics of. P.M.Pelosi, P.Vandenbulcke, C.D.W.Wilkinson and R.M.De La Rue 607
Optical wavelength-division multiplexing, high-speed digital-signal transmission experiments by. S.Sugimoto, K.Minemura, K.Kobayashi, M.Seki, M.Shikada, A.Ueki, T.Yanase and T.Miki 680
Optimal control problem, inverse, for linear discrete-time systems. J.Willems and H.Van de Voorde 493
Optimal parameter surfaces for 2nd-order discrete control systems. N.E.Gough and P.R.Bunn 132
Optimisation of sensitivity and dynamic range of i.f.l.f. active filters. R.Schaumann, Chalstrom. R.E. and K.R.Laker 367
Optimisation procedure, novel, applied to the minimisation of the ripple of a microwave amplifier. A.Benasson, A.Rabier and P.Harrop 685
Optimum design for a broadband microstrip balun. D.M.L.Bartholomew 510
Optoelectronic switch, microstrip, theoretical model for a. A.Meriau, R.Castagne, R.Laval and S.Laval 245
Optoelectronic switches, laser-excited photoconductivity in, diffusion-controlled decay of. W.Platte 321
Orthogonal transform for estimating the number of targets in a radar resolution cell. C.E.Pykett 151
Oscillation, c.w., negative resistance and, of the transit-time transistor. G.Salmer, Y.Crosnier, Y.Druelle and M.Armand 100
Oscillator/amplifier, high-power 10%-tuning-bandwidth varactor-controlled impatt. P.W.Braddock and R.D.Hodges 179
Oscillator, external, measurements of the close-to-carrier f.m. noise of pulsed InP t.e.o.s. primed by an. B.A.Prew 344
Oscillator, improved cavity-stabilised, circuit for single-mode operation. R.Knochel and K.Schunemann 583
Oscillator-induced-, local, noise in GaAs Schottky mixer diodes. R.J.Mattauch and F.S.Fei 22
Oscillator, surface-acoustic-wave, tuned by magnetoelastic effect. G.Volluet 588
Oscillator voltage-controlled oscillator, using an emitter-coupled differential pair. S.B.Roy and D.Patranabis 590
Oscillators, GaAs m.e.s.f.e.t., in the frequency range 8-25 GHz, performance of. H.Q.Tserng, H.M.Macksey and V.Sokolov 85
Oscillators, high-efficiency pulsed InP, effect of thermal impedance on chirp characteristics of. D.M.Brookbanks 697
Oscillators, impatt, leakage current enhancement in, by photoexcitation. H.P.Vyas, R.J.Gutmann and J.M.Borrego 189
Oscillators, InP transferred-electron, high-efficiency and high-peak-power. J.Mun 275
Oscillators, l.s.a.-mode, transferred-electron, second-harmonic locking properties of. F.J.Lidgey and P.J.Allen 260
Oscillators, mm-wave transferred-electron, photoetching of InP mesas for production of. D.Lubzens 171
Oscillators, octave-band GaAs f.e.t. y.i.g.-tuned. R.J.Trew 629
Oxides, thermal, electrical properties of, on GaAs. D.N.Butcher and B.J.Sealy 558

P

P.A.M. pulse techniques, television-test-signal generation by using. H.Schroder 670
P.A.M. signal demodulator, design strategy for. R.Ishii 297

P.C.M. systems, hybrid waveform equalisation scheme for coaxial. K.S.Chung and D.G.W.Ingram 332
Parallel-in/serial-out: a new approach for c.c.d. transversal filters. K.Knauer, L.Mader, M.-J.Pfleiderer and M.Schlichte 126
Errata 272
Paramaters, GaAs m.e.s.f.e.t. equivalent-circuit, determination of, from I/V and 1 MHz measurements. J.M.Borrego, R.J.Gutmann, M.Chudzicki and S.Moghe 756
Partial correction of transmission errors in d.p.c.m. without recourse to error correction coding. R.Steele, D.J.Esdale and D.J.Goodman 351
Passband filters, cascaded s.a.w. gratings as. H.A.Haus and R.V.Schmidt 445
Passband, synthesis of filters with minimum integrated power-loss ratio in the. V.Picciarelli and M.Torre 612
Passband, synthesis of filters with minimum integrated power-loss ratio in the. K.M.M.Prabhu, V.U.Reddy and J.P.Agrawal 600
Pattern-roecognition properties of r.a.m./r.o.m. arrays. M.Dobree Wilson and I.Aleksander 253
Patterns, primary feed, broadening of, by small E-plane slots. L.Shafai 102
Peak values of system response to a pseudorandom input. G.H.Tomlinson and P.Galvin 392
Performance comparison of data windows. K.M.M.Prabhu, V.U.Reddy and J.P.Agrawal 600
Performance evaluation of a general framing circuit using two N-stage shift registers. P.F.Lee, Q.S.Chow and P.E.K.Chow 598
Performance of GaAs m.e.s.f.e.t. oscillators in the frequency range 8-25 GHz. H.Q.Tserng, H.M.Macksey and V.Sokolov 85
Performance of p-i-n- photodiodes compared with avalanche photodiode in the longer-wavelength region of 1 to 2 μm. S.Hata, K.Kajiyama and Y.Mizushima 668
Phase equalisation of analogue magnetic recorders by transversal filtering. D.Preis 127
Phase equaliser, Hilbert-transformer side-chain, for analogue magnetic recording. D.Preis 616
Phase filtering with time reversal. P.B.Fellgett 153
Phase normalised m-sequences with the inphase decimation property {m(k)} = {m(2k)}. R.J.Kavanagh 222
Phase of crosspolarised signals on microwave satellite links. N.J.McEwan 489
Phase-shift modulation technique for the linearisation of analogue optical transmitters. J.Straus, A.J.Springthorpe and O.I.Szentesi 149
Phase-shift, new active quadrature, network. J.Haine 216
Phase shifters, stepped-impedance. L.Faltin 524
Photoconductivity, laser-excited, in optoelectronic switches, diffusion-controlled decay of. W.Platte 321
Photodiode, avalanche, performance of p-i-n photodiode compared with, in the longer-wavelength region of 1 to 2 μm. S.Hata, K.Kajiyama and Y.Mizushima 668
Photodiode-, avalanche, structures, avalanche-noise dependence on. K.Nishida 419
Photodiode, highly sensitive GaAs/(GaA1) As, transparent. W.Eickhoff, P.Marschall and E.Schlosser 493
Photodiode, large linear area light-spot-position-sensitive. J.Fieret, A.Kwakernaak and S.Middelhoek 422
Photodiodes, avalanche, figure of merit for. H.Kanbe and T.Kmura 262
Photodiodes, double epitaxial silicon avalanche, for optical-fibre communications. K.Nishida, K.Ishii, K.Minemura and K.Taguchi 280
Photoetching of InP mesas for production of min-wave transferred-electron oscillators. D.Lubzens 171
Photoexcitation, by, leakage current enhancement in impatt oscillators. H.P.Vyas, R.J.Gutmann and J.M.Borrego 189
Pictures, polar-vector representations of edges in. B.G.Batchelor and S.G.Laing 727
Planar transistor, instantaneous change in current gain produced by burst noise in a. K.F.Knott 467
Plotter, root-locus, design of a. G.Thomas 410
Polar-vector representations of edges in pictures. B.G.Batchelor and S.G.Laing 727
Polarisation dependence, complex radar objects and, of received backscattered echoes. A.J.Poelman 433
Polarised waves at 36.5 GHz, propagation coefficients for vertically and horizontally. J.Neves and P.A.Watson 649
Polarised waves, circularly, crosspolarisation for linearly and, propagating through a population of ice particles on satellite-earth paths. D.P.Haworth, N.J.McEwan and P.A.Watson 703
Poles, dominant, simple approximations for the gain margin of systems having two. G.J.Sloggett 286
Polynomial, minimal, computing the, by using Koenig's theorem. Y.Shamash 166
Position sensor, novel, for magnetic suspension. J.W.Finch and M.J.Crawford 735
Power loss caused by random mode coupling in a multimode optical fibre. K.Tatekura, K.Itoh and T.Matsumoto 767
Preamplifiers, high-speed optical. J.L.Hullett, T.V.Muoi and S.Moustakas 688
Predictable sample error detector and a planar prediction corrector for removal of isolated transmission errors in Walsh-Hadamard transformed pictures. D.M.Fenwick and R.Steele 08
Prediction of microwave slant-path attenuation from point rainfall-rate measurements. J.E.Allnutt 376
Preliminary test results on a 140 Mbit/s experimental optical-fibre transmission system. R.W.Berry, R.C.Hooper and B.R.White 358
Probe correction of spherical near-field measurements. F.H.Larsen 393
Processor, efficient hard-wired digital fast-fourier-transform. R.J.Risk 458
Propagation and radiation characteristics of rib waveguide. T.S.Bird 401
Propagation characteristics of trapezoidal-cross-section ridge optical waveguides. P.M.Pelosi, P.Vandenbulcke, C.D.W.Wilkinson and R.M.De La Rue 607
Propagation coefficients for vertically and horizontally polarised waves at 36.5 GHz. J.Neves and P.A.Watson 649
Propagation, multipath, analysis of fading due to rain, snow and, for 11 GHz radio links variously located in England. D.J.W.Turner and R.L.O.Tattersall 619
Propagation parameters, radiowave, method of obtaining, for the Earth-ionosphere duct at e.l.f.. M.Ishaq and D.Llanwyn Jones 254
Propagation, radio, model for the effect of electric fields on satellite-earth microwave. D.P.Haworth, P.A.Watson and N.J.McEwan 562
Properties of X-ray guides. P.S.Chung and R.H.Pantell 527
Pulse compression in optical fibres. J.V.Wright and B.P.Nelson 361
Pulse-compression networks, development in lumped-component. J.P.Newsome and O.Safavian 205
Pulse distortion in single-mode fibres with microbending. K.Petermann 49
Pulse generator, improved versatile gigahertz. U.Barabas and U.Langmann 28
Pulse regeneration, high-bit-rate, and injection laser modulation using a diode circuit. U.Wellens 529
Pulse regenerator, differential, driven by 1 Gbit/s p.c.m.-type signals from an avalanche photodiode. U.Barabas 536
Pulse response and microbending losses of an optical glass-fibre waveguide with a bump in its index profile. W.Eickhoff and O.Krumpholz 256
Pulse-shaping transmission line, gyromagnetic nonlinear element and its application as a. T.Yagi and A.Noguchi 683
Pulses, subnanosecond, threshold detector for. A.M.Nicolson 415

Q

Q-factor, interently stable, new multifunction biquadratic filter circuit with. L.Brown and A.S.Sedra 719
Quartz, crystalline, correlation between stimulated scattering processes and laser-induced damage in. C.Yu, M.F.Haw and H.Hsu 240
Quartz, ST, efficient bulk wave excitation on. K.H.Yen, K.L.Wang and R.S.Kagiwada 37

R

Radar calibration by using frequency domain measurements. C.E.Pykett and C.D.Watkins 514
Radar display system using c.c.d. for time expansion. T.P.Pulford and A.H.James 700
Radar objects, complex, and polarisation dependence of received backscattered echoes. A.J.Poelman 433
Radar resolution cell, orthogonal transform for estimating the number of targets in a. C.E.Pykett 151
Radiation characteristics of a step discontinuity in a monomode optical fibre. D.Opielka 319
Radiation-induced degradation of ohmic contacts. R.Blundell, D.V.Morgan and M.J.Howes 483
Radiation of discrete beams from curved single-mode fibres. C.G.Someda 712
Radiation properties of 90° conical horns. G.L.James 293
Radio links, 11 GHz, analysis of fading due to rain, snow and multipath propagation for, variously located in England. D.J.W.Turner and R.L.O.Tattersall 619
Radio paging, addressing in. P.J.Mabey 772
Radio propagation, satellite-earth microwave, electric fields on, model for the effect of. D.P.Haworth, P.A.Watson and N.J.McEwan 562
Radio signals, transmission of, in deep-level gold mines indirectly via power cables. B.A.Austin and I.Kerdic 462
Radiocommunication, millimetre-wave satellite, effect of squall-line direction on space-diversity improvement obtainable with. E.C.MacKenzie and J.E.Allnutt 571
Radiometers, 20 and 30 GHz, calibration of, by
Radiometry, passive, effect of scattering in measurements of rain-attenuation by. R.Chadha and J.A.Lane 177
Rain attenuation by passive radiometry, effect of scattering in measurements of. R.Chadha and J.A.Lane 177
Rain, attenuation due to, at low elevation angles. R.R.Rogers 427
Rain depolarisation, theoretical relationship between, and attenuation. W.L.Nowland, R.L.Olsen and I.P.Shkarofsky 676
Rain, snow, analysis of fading due to, and multipath propagation for 11 GHz radio links variously located in England. D.J.W.Turner and R.L.O.Tattersall 619
Rainfall-rate measurements, point, prediction of microwave slant-path attenuation from. J.E.Allnutt 376
Rainstorms, slant-path attenuation through. J.L.Eaton 455
Random-noise powers, wideband, calculation of, in television systems. J.M.Corbett 530
Random noise, subjective data for, measured through the new CMTT unified weighting network for television. G.M.Reid 351
RC active variable-group-delay equaliser. G.Wilson 424
Receding-horizon approach to the synthesis of nonlinear multivariable regulators. Y.Thomas, D.Sarlat and L.Shaw 329
Recombination, theory of depletion-layer, in silicon p-n junctions. P.J.Anderson and M.J.Buckingham 496
Rectifier circuit, new phase-sensitive. S.F.Carter and E.A.Faulkner 439
Rectifier, precision fullwave, versatile. R.W.J.Barker and B.L.Hart 143
Redundancy bounds for multiple-burst error-correcting codes. G.Benelli, C.Bianciardi and V.Cappellini 389
Referred impedance noise analysis for feedback amplifiers. J.L.Hullett and T.V.Muoi 387
Reflector antennas, diffraction-optimised shaped-beam. R.D.Elliot and G.T.Poulton
Errata 491
Reflector antennas, large, necessary criteria for the diagnosis of panel misalignments in, by microwave metrology. J.C.Bennett and M.P.Godwin 463
Reflector antennas, loss in gain and boresight crosspolarisation in, with surface errors. S.I.Ghobrial 623
Reflectors, paraboloidal, effect of surface distortions on the crosspolarisation performance of. B.Maca Thomas and P.T.Rayner 478
Refractive index, determination of, and ellipticity of an unclad elliptical optical fibre. P.L.Chu, C.Saekeang and Y.M.Chow 41
Refractive-index profiles of stress-induced (embossed) optical waveguides. P.V.H.Sabine 51
Refractive-index profiles of stress-induced (embossed) optical waveguides. P.V.H.Sabine 51
Regenerative transistor power switch. D.G.Van Der Merwe and W.J.Louw 474
Registers, two N-stage shift, performance evaluation of a general framing circuit using. P.F.Lee, Q.S.Chow and P.E.K.Chow 598
Regulators, algorithm for the synthesis of state-feedback, by entire eigenstructure assignment. J.J.D'Azzo and B.Porter 230
Regulators, multivariable, receding-horizon approach to the synthesis of nonlinear. Y.Thomas, D.Sarlat and L.Shaw 329
Resonant generators, long-range-interaction, nonlinear theory of. A.A.Shmat'ko, O.A.Tretikov and D.M.Vavriv 480
Resonator, -s.a.w., suppression of bulk-scattering loss at, reflectors. R.C.M.Li and J.A.Alusow 580
Resonators, acoustic-bulk-wave, and filters operating in the fundamental mode at frequencies greater than 100 MHz. M.Berte 248
Resonators, coupled slot waveguide s.a.w.. L.A.Coldren 559
Resonators, high-Q-factor s.a.w., at 780 MHz. K.R.Laker, T.L.Szabo and W.J.Kearns 97
Resonators, overtone lithium-tantalate thickness-mode, zero temperature coefficients in. J.Detaint 20 Errata 336
Resonators, s.a.w. grating, experimental verification of mode shape in. L.A.Coldren, H.A.Haus and K.L.Wang 642
Resonators, s.a.w. grating, modes in. H.A.Haus 12
Retention grooves for optical-fibre connectors. K.Hollerl, J.Thurnbeck and L.Reiter 74

Rigorous analysis of cross-polarisation in flange-mounted rectangular-waveguide radiators. A.R.Jamieson and T.E.Rozzi 742
Root-locus plotter, design of a. G.Thomas 410
Runlength coding systems for black-and-white facsimile pictures: a comparison. G.Renelt 573

S

S.A.W. chirp filters, frequency-hopped waveform synthesis by using. E.W.Patterson, A.S.M.Dods and J.M.Hannah 633
S.A.W. component design, silicon, inclusion of conductivity in. A.Venema and R.F.Humphreys 594
S.A.W. devices, sonar beamforming using c.c.d. and, two-dimensional transform processor for. M.A.Jack and P.M.Grant 65
S.A.W. filter, two-port description of a. C.F.Vasile 326
S.A.W. grating resonators, experimental verification of mode shape in. L.A.Coldren, H.A.Haus and K.L.Wang 642
S.A.W. gratings, cascaded, as passband filters. H.A.Haus and R.V.Schmidt 445
S.A.W.-oscillator, noise spectra, effect of vibration on. R.D.Weglein and O.W.Otto 103 Errata 272
S.A.W.-resonator reflectors, suppression of bulk-scattering loss at. R.C.M.Li and J.A.Alusow 580
S.A.W. resonators, coupled slot waveguide. L.A.Coldren 559
S.A.W. resonators, high-Q-factor, at 780 MHz. K.R.Laker, T.L.Szabo and W.J.Kearns 97
S.A.W. right-angle reflection coefficient from metal-strip array reflector on y-cut $LiNbO_3$. T.Kitano and K.Nishikawa 136
S.A.W. storage correlator, large-time-bandwidth-product correlation and holographic storage with an. H.C Tuan and G.S.Kino 709
S.A.W. transducers, thin-film, calculations of $\Delta v/v$ for, on a nonzero conductive silicon substrate. A.Venema, R.F.Humphryes and J.J.M.Dekkers 647
Satellite beacons, ATS-6, calibration of 20 and 30 GHz radiometers by using the. R.R.Bell 412
Satellite channel, nonlinear, E.I.R.P. allocation for a, with multiple transmit beams and carriers. J.Arnbak 652
Satellite channels, hard-limited, intersymbol-interference error bounds for. M.Ekanayake and D.P.Taylor 498
Satellite, communications technology, measurements of depolarisation and attenuation at 11.7 GHz by using the. W.L.Nowland, J.I.Strickland, J.Schlesak and R.L.Olsen 750
Satellite-earth microwave radio propagation, electric fields on, model for the effect of. D.P.Haworth, P.A.Watson and N.J.McE—wan 562
Satellite-earth path, crosspolar variations on a. J.Thirlwell, D.M.Knox and R.G.Howell 516
Satellite-earth path, on a, crosspolar ohase variations at 20 and 30 GHz. R.G.Howell 405
Satellite-earth path, simultaneous 20 and 30 GHz attenuation measurement on a. R.G.Howell, J.Thirlwell and N.G.Golfin 640
Satellite-earth paths, crosspolarisation for linearly and circularly polarised waves propagating through a population of ice particles on. D.P.Haworth, N.J.McEwan and P.A.Watson 703
Satellite-earth signal depolarisation at 30 GHz in the absence of significant fading. P.F.Shutie, J.E.Allnutt and E.G.MacKenzie 01
Satellite-ground signal depolarisation at millimetre wavelengths through thunderstorms. P.F.Shutie, E.C.MacKenzie and J.E.Allnutt 556
Satellite links, microwave, phase of crosspolarised signals on. N.J.McEwan 489
Satellite paths, microwave, crosspolarisation phase due to ice crystals on. B.G.Evans and A.R.Holt 664
Satellite radio path, 20 GHz, crosspolarisation from high-altitude hydrometeors on a. N.J.McEwan, P.A.Watson, A.W.Dissanayake, D.P.Haworth and V.T.Vakili 13
Satellite radiocommunication systems millimetre-wave, effect of squall-line direction on space-diversity improvement obtainable with. E.C.MacKenzie and J.E.Allnutt 571
Satellite, switched, efficient synchronisation signal for the. C.R.Carter 646
Satellite-to-ground radio paths, 12 GHz, variation of attenuation and space diversity with elevation angle on. J.E.Allnutt 346
Satellites, large cylindrical, V.H.F.-turnstile-antenna performance as a function of antenna geometry on. K.M.Keen 654
Scatter, calculation of forward, and crosspolarisation from ice spheroids. P.A.Watson and A.W.Dissanayake 555
Scattered electromagnetic waves, experimental comparison between induced surface current and, for a metal target with time-varying characteristics. A.J.Bahr and J.P.Petro 777
Scattering amplitudes and crosspolarisation of ice particles. B.G.Evans and A.R.Holt 342
Scattering, ionised impurity, effect of, on the electron transit time in GaAs and InP f.e.t.s.. G.Hill, P.N.Robson, A.Majerfeld and W.Fawcett 235
Scattering problems, matrix description of. R.J.Chignell and D.Munro 353
Schemes for increased output-voltage swing from operational amplifiers. P.Garde 111
Schottky-barrier-diode frequency multipliers, GaAs, in 300 and 450 GHz bands. T.Takada, T.Yagasaki and M.Hirayama 699
Schottky-diode, pumped, mixers, evidence for coherent noise in. N.J.Keen 282
Schottky diodes connected metal to metla, measurements of the electron accumulation on two. N.Hashizume, S.Kataoka and K.Tomizawa 495
Schottky mixer diodes, GaAs, local-oscillator-induced noise in. R.J.Mattauch and F.S.Fei 22
Schottky mixer diodes made by a new method. J.Lacombe, J.P.Duchemin, M.Bonnet and D.Huyghe 472
Schottky-trigger electrode, Gunn-effect memory device using the charge accumulation on a. N.Hashizume and S.Kataoka 60
Search procedure for efficient superdirective array and image enhancement functions. A.P.Anderson, M.M.Dawoud, J.C.Bennett and P.D.Patel 43 Errata 168
Second-harmonic locking properties of l.s.a.-mode transferred-electron oscillators. F.J.Lidgey and P.J.Allen 260
Selenium, implantation of, into $Ga_{1-x}Al_xAs$. P.N.Favennec, L.Henry and T.Janicki 338
Semiconductor-, amorphous, switches, microwave modulation by. D.N.Bose and B.J.Jani 451
Semiconductor avalanches, intrinsic response time and related quantities describing. B.B.Van Iperen and J.J.Goedbloed 448
Semiconductor components, integral-equation approach to the abrupt-depletion approximation in. P.De Visschere and G.De Mey 104
Semiconductor films, thin, electric-field-induced anisotropy of. Barybin. A.A. 243
Semiconductor lasers, continuous-wave, 1/f noise of. G.Tenchio 614
Semiconductor lasers, correlation between the optical output characteristics and the time-dependent behaviour of. O.Krumpholz and H.Gottsmann 364
Semiconductor structures, thin-film, calculation of external circuit current of. A.A.Barybin 239
Semiconductor waveguide antenna, light-controlled. R.Karg and E.Kreutzer 246
Sensitivity, optimisation of, and dynamic range of i.f.l.f. active filters. R.Schaumann, Chalstrom. R.E. and K.R.Laker 367
Sequence, m-, high-speed, generation, combinational logicfeee realisations for. A.C.Arvillias and D.G.Maritsas 500
Sequences, binary, correlation parameters of random. H.F.A.Roefs and M.B.Pursley 488
Sequential regression considerations of adaptive filtering. N.Ahmed, D.L.Doldan, D.R.Hummels and D.D.Parikh 446
Series-connected GaAs and Si impatt-diode chips: sone new results. C.T.Rucker, J.W.Amoss, G.N.Hill and N.W.Cox 331
Shift registers, two N-stage, performance evaluation of a general framing circuit using. P.F.Lee, Q.S.Chow and P.E.K.Chow 598
Shifters, phase, stepped-impedance. L.Faltin 524
Sideband, -vestigal, distortionless, transmission and symmetric delay about the carrier frequency and synchronous demodulation. W.E.Thomson 58
Signal averaging, and, time stretching, simultaneous, c.c.d. processor for. G.D.Cain and R.C.S.Morling 269
Signal generation, television-test-, by using p.a.m. pulse techniques. H.Schroder 670
Signal processing, audio, effect of gain control and modulation on harmonic nonlinear operators, with applications to. M.A.Gerzon 118
Signal processing, r.f., fibre-optic delay-line devices for. C.T.Chang, J.A.Cassaboom and H.F.Taylor 678
Signal processing with fast chirp waveforms. R.A.Zakarevicius 296
Signals, dispersed time, fast numerical algorithm for the recompression of. A.K.Booer, J.Chambers and I.M.Mason 453
Silicon dioxide, defects in, control of. D.A.Baglee, R.Gill, R.A.Stuart and W.Eccleston 144
Silicon, ion-implanted, structural and electrical profiles for double damage layers in. D.K.Sadana, J.Fletcher and G.R.Booker 632
Simple analysis of anisotropic microstrip lines by a transform method. B.T.Szentkuti Errata 92
Simple approximations for the gain margin of systems having two dominant poles. G.J.Sloggett 286
Simple characterisation factor for practical single-mode fibres. W.A.Gambling and H.Matsumura 691
Simple design procedure for single-sideband crystal filters. J.L.Haine 687
Simple electronically tunable 2nd-order active filter. J.B.Grimbleby 258
Simplified GaAs m.e.s.f.e.t. model to 10GHz. R.A.Minasian 549
Simulation, computer of charge generation in trapatts. P.A.Blakey 434
Simulation of a proposed near-field-to-far-field antenna measurement system. K.M.Keen 225
Simultaneous 20 and 30 GHz attenuation measurements on a satellite-earth path. R.G.Howell, J.Thirlwell and N.G.Golfin 640
Simultaneous measurements of radio refractivity and multipath fading on 2 July 1975 at 11, 19 and 36 GHz on a 7.5 km path. N.E.Cartwright and R.L.O.Tattersal 208
Single-mode fibre, radially inhomogeneous, cut-off frequency in. W.A.Gambling, D.N.Payne and H.Matsumura 139
Single-mode operation of low-attenuation corrugated waveguide. C.G.Parini, P.J.B.Clarricoats and A.D.Oliver 16
Sinusoidal-frequency-halving technique. R.W.J.Barker and K.P.Corrin 201
Skywave field strengths, effect on, of proximity to a discontinuity in the earth's electrical properties. A.Kinase 184
Slant-path attenuation through rainstorms. J.L.Eaton 455
Small-area, high-radiance c.w. InGaAsP l.e.d.s emitting at 1.2 to 1.3μm. A.G.Dentai, T.P.Lee, C.A.Burrus and E.Buehler 484
Solar-cell characteristics, influence of junction roughness on. G.De Mey, B.Jacobs and F.Fransen 657
Solution of currents on linear antennas: eigenfunctions and resonance. J.Walsh 17
Solution of interconnected subsystems. I.N.Hajj 78
Sonar beamforming, two-dimensional transform processor for, using c.c.d. and s.a.w. devices. M.A.Jack and P.M.Grant 65
Spark-induced fracture of optical fibres. P.Hensel 603
Spatial correlation of field intensity in incoherently illuminated multimode fibres. E.Bianciardi, V.Rizzoli and C.G.Someda 25
Spectra of a.c.-induced noise in resistors. H.Sutcliffe and Y.Ulgen 397
Spectrum analyser, C.C.D., using prime transform algorithm. M.A.Jack, D.G.Park and P.M.Grant 431
Spectrum analysis with a c.c.d. delay line. J.S.Heeks, J.D.Jackson and G.R.Adams 738
Speech and music, efficient pitch estimation for. W.H.Tucker and R.H.T.Bates 357
Speech signals, sampled, method of data reduction of, by using nonuniform sampling and a time-variable digital filter. T.Fjallbrant 334
Splices, low-loss, for single-mode fibres. A.R.Tynes and R.M.Derosier 673
Square-waves, triangular-waves, and, new method for generating precise. B.Z.Kaplan and Y.Tatrash 71
Stabilisation and pole placement, necessary conditions for, with output feedback. M.Tarokh 148
Stabilised, cavity-, Gunn oscillators, temperature compensation of. R.Knochel and K.Schunemann 723
Stabilising circuit for a tuned-circuit magnetic levitator. M.R.Button and P.N.Murgatroyd 477
Stability of impatt-diodes circuits, low-frequency. M.G.Reggiani 82
Stable charge storage of m.a.o.s. diodes on GaAs by new anodic oxidation. B.Bayraktaroglu, S.J.Hannah and H.L.Hartnagel 45
Static decoupling of multivariable linear systems with slow and fast modes. B.Porter 23
Static-hazard detection in switching circuits by prime-implicant examination in fuzzy functions. A.Thayse 94
Statistical model for the prediction of the bandwidth of an optical route. M.Eve Errata 591
Stepped-impedance phase shifters. L.Faltin 524
Storage of m.a.o.s. diodes on GaAs, stable charge, by new anodic oxidation. B.Bayraktaroglu, S.J.Hannah and H.L.Hartnagel 45
Stratification methods in the numerical analysis of optical-waveguide transmission parameters. J.M.Arnold 680
Stress birefringence in single-mode fibres. O.G.Leminger 370
Stripe-geometry d.h. lasers with linear output/current characteristics. P.J.De Waard 400
Striplines, M.I.S. and Sckottky slow-wave coplanar on, GaAs substrates. H.Hasegawa and H.Okizaki 663
Structural and electrical profiles for double damage layers in ion-implanted silicon. D.K.Sadana, J.Fletcher and G.R.Booker 632
Structure, m.o.s., resistive-gate, model for charg propagation in a. R.M.Barsan 475
Subjective data for random noise measured through the new CMTT unified weighting network for television. G.M.Reid 551

Subjective quality of television pictures impaired by linear waveform distortion. J.W.Allnatt 546
Submicrometre A10.5AS heterojunction gate GaAs f.e.t.. H.Morkoc, S.G.Bandy, G.A.Antypas and R.Sankaran 487
Suboptimum quantiser/coder for a receiver with ternary integration. W.J.Szajnowski 658
Suppression of bulk-scattering loss at s.a.w.-resonator reflectors. R.C.M.Li and J.A.Alusow 580
Suppression of higher-order modes in subsidiary resonance waveguide limiters. E.Davidson and I.Helszajn 585
Surface-acoustic-wave beam shaping with multistrip couplers. A.Ronnekleiv and K.Ingebrigtsen 349
Surface-acoustic-wave filters, wideband, compensation technique for the design of, using multistrip couplers. E.L.Walker 413
Surface acoustic-wave oscillator tuned by magneto-elastic effect. G.Volluet 588
Surface-acoustic-wave pulse-compression filters, dispersive propagation in. D.P.Morgan and J.M.Deacon 741
Surface-acoustic-wave, unidirectional, transducers with a ZnO film on glass substrate. Y.Shimizu and T.Hata 384
Surface waves, horizontal shear, on a laminated composite. B.A.Auld, G.S.Beaupre and G.Herrmann 525
Switch, new avalanche-injection-controlled. F.P.Califano, A.Caruso, P.Spirito and G.F.Vitale 196
Switch, power, regenerative transistor. D.G.Van Der Merwe and W.J.Louw 474
Switching circuits, static-hazard detection in, by prime-implicant examination in fuzzy functions. A.Thayse 94
Symbol-by-symbol jitter measurement in high-speed digital systems. G.C.Gurst, W.H.Holmes and R.A.Zakarevicius 81
Synthesis cycle, new, for LC impedances. D.M.Cuong and M.Hasler 630
Synthesis, frequency-hopped waveform, by using s.a.w. chirp filters. E.W.Patterson, A.S.M.Dods and J.M.Hannah 633
Synthesis of cutpoint cellular arrays with exclusive-or collector row. G.Papakonstantinou 486
Synthesis of filters with minimum integrated power-loss ratio in the passband. V.Picciarelli and M.Torre 612
Synthesis of some partially symmetric boolean functions by ternary algebra. M.Davio and J.-P.Deschamps 473
Systems, commutativity of time-varying. J.E.Marshall 539
Systems, linear multivariable continuous-time, transmission zeros of. B.Porter and J.J.D'Azzo 753
Systems, nonlinear, identification of, using the Wiener model. S.A.Billings and S.Y.Fakhouri 502

T

Technique for increasing the gain-bandwidth product of n-m.o.s. and p-m.o.s. integrated inverters. Y.P.Tsividis Errata 591
Techniques for increasing the effective charge-transfer efficiency of tapped c.c.d. registers. J.Mavor, M.C.Davie and P.B.Denyer 31
Television pictures, subjective quality of, impaired by linear waveform distortion. J.W.Allnatt 546
Television, subjective data for random noise measured through the new CMMT unified weighting network for. G.M.Reid 551
Television systems, calculation of wideband random-noise powers in. J.M.Corbett 530
Television-test-signal generation by using p.a.m. pulse techniques. H.Schroder 670
Television test waveform, new: J.E.Holder 264
Temperature compensation of cavity-stabilised Gunn oscillators. R.Knochel and K.Schunemann 723
Test logic, adaptively designed, for digital circuits. I.Aleksander and Z.Al-Bandar 466
Theoretic-, number-, transforms, Winograd's algorithm applied to. D.Bailey 548
Theoretical model for a microstrip optoelectronic switch. A.Meriau, R.Castagne, R.Laval and S.Laval 245
Theoretical relationship between rain depolarisation and attenuation. W.L.Nowland, R.L.Olsen and I.P.Shkarofsky 676
Theory of depletion-layer recombination in silicon p-n junctions. P.J.Anderson and M.J.Buckingham 496
Thermal impedance, effect of, on chirp characteristics of high-efficiency pulsed InP oscillators. D.M.Brookbanks 697
Thick-film 3-stage m.i.c. impatt-diode-amplifier on ferrite. R.Genner, W.Richmond and P.W.Braddock 193
Thin-film magnetostatic amplifier: analytical expressions of dispersion and gain properties. M.Bini, L.Millanta and N.Rubino 114
Thin-film semiconductor structures, calculation of external circuit current of. A.A.Barybin 239
Threshold detector for subnanosecond pulses. A.M.Nicolson 415
Threshold-logic-function implementation, improved forms of. L.A.M.Bennett 368
Threshold-logic-functions and the exclusive-or. L.A.M.Bennett 195
Through pulse measurement technique for assessing the forward echo performance of coaxial cables. P.Cochrane 02
Through-pulse measurements on installed 1.2/4.4mm coaxial cables: two examples. P.Cochrane and A.Rain 307
Thunderstorms, satellite-ground signal depolarisation at millimetre wavelengths. P.F.Shutie, E.C.MacKenzie and J.E.Allnutt 556
Time-varying, commutativity of, systems. J.E.Marshall 539
Tin-dioxide films, d.c.-sputtered antimony-doped, effect of substrate temperature on. A.G.Sabnis and K.Chang 113
Tolerance assignment in nonconvex acceptability regions. F.Filicori 79
Tracking sensitivity: A practical algorithm. T.Neumann and D.Agnew 371
Transducer, ultrasonic, novel variable-focus. S.D.Bennett and J.Chambers 110
Transducer, unidirectional, for Lamb-wave delay lines. K.Toda and Y.Shinoda 363
Transducers, interdigital, new family of bulk-acoustic-wave devices employing. T.I.Browning and M.F.Lewis 128
Transducers, thin-film s.a.w., calculations of $\Delta v/v$ for, on a nonzero conductive silicon substrate. A.Venema, R.F.Humphryes and J.J.M.Dekkers 647
Transferred-electron oscillators, mm-wave, photoetching of InP mesas for production of. D.Lubzens 171
Transform algorithm, prime, C.C.D. spectrum analyser using. M.A.Jack, D.G.Park and P.M.Grant 431
Transform coding using charge-coupled devices. J.B.G.Roberts, E.H.Darlington, R.D.Edwards and R.F.Simons 277
Transform method, simple analysis of anisotropic microstrip lines by a. B.T.Szentkuti Errata 92
Transform, orthogonal, for estimating the number of targets in a radar resolution cell. C.E.Pykett 151
Transformed pictures, Walsh-Hadamard, predictable sample error detector and a planar prediction corrector for removal of isolated transmission errors in. D.M.Fenwick and R.Steele 08
Transforms, complex number-theoretic, fast algorithm for computing. I.S.Reed, K.Y.Liu and T.K.Truong 278
Transforms, number-theoretic, Winograd's algorithm applied to. D.Bailey 548
Transforms, polynomial, digital filtering using. H.J.Nussbaumer 386
Transient analysis of logic systems, new gate model for the. R.Murray-Shelley and P.L.Arlett 639
Transistor arrays, leakage factor and burst noise in. K.F.Knott 523
Transistor data, method of obtaining accurate, for the evaluation of computer models. A.Stevenson 436
Transistor, I^2L, high level injection in the epilayer of the. K.Yu 202
Transistor, planar, instantaneous change in current gain produced by burst noise in a. K.F.Knott 467
Transistors, junction field-effect, change of some properties of, after ionising irradiation. G.Dehmel and D.Braunig 601
Transistors, n-channel enhancement e.s.f.i.-m.o.s. s.o.s., current-kink noise of. W.Fichtner and E.Hochmair 675
Transistors, n-p-n, negative current-mirror using. W.J.Barker and B.L.Hart 311
Transit-time transistor, negative resistance and c.w. oscillation of the. G.Salmer, Y.Crosnier, Y.Druelle and M.Armand 100
Transmission characteristics of a dielectric-tube waveguide with an outer higher-index cladding. M.Miyagi and S.Nishida 274
Transmission, data-, filters, design tables for a class of. L.F.Lind and S.Nader-Esfahani 564
Transmission line, pulse-shaping, gyromagnetic nonlinear element and its application as a. T.Yagi and A.Noguchi 683
Transmission lines, microstrip, network analysis of microwave oscillators using. C.M.Krowne 115
Transmission of radio signals in deep-level gold mines indirectly via power cables. B.A.Austin and I.Kerdic 462
Transmission systems, vestigial-sideband waveform, delay equalisation of. R.Weeks 291
Transmission zeros of linear multivariable continuous-time systems. B.Porter and J.J.D'Azzo 753
Transparent, highly sensitive GaAs/(GaA1) As photodiode. W.Eickhoff, P.Marschall and E.Schlosser 493
Transverse light coupling from GaAs laser into optical fibres. C.C.Timmermann 766
Trapatt amplifiers, X-band. C.H.Oxley, A.M.Howard and J.J.Purcell 416
Trapatt diodes, charge generation in. I.W.Mackintosh 231
Trapatts, computer simulation of charge generation in. P.A.Blakey 434
Triangular waves and square waves, new method for generating precise. B.Z.Kaplan and Y.Tatrash 71
Triple-ball connector for optical fibres. P.Hensel 734
Tunable millimetre-wave ferrite bandpass filter with reduced biasing field. H.Brand and N.Krause 576
Tunable Raman fibre-optic laser. D.C.Johnson, K.O.Hill, B.S.Kawasaki and D.Kato 53
Tunable Y-type waveguide power divider as standard mismatch. U.Stumper Errata 591
Two-dimensional transform processor for sonar beamforming using c.c.d. and s.a.w. devices. M.A.Jack and P.M.Grant 65
Two-Josephson-junction interferometer memory cell for n.d.r.o.. H.Beha 596
Two-loop ternary adaptive delta modulation. T.S.Lamba, M.N.Faruqui and R.Steele 337
Two-port description of an s.a.w. filter. C.F.Vasile 326

U

Ultrasonic transducer, novel variable-focus. S.D.Bennett and J.Chambers 110
Uncertainties of the leaky mode correction for near-square-law optical fibres. K.Petermann 513
Unidirectional surface-acoustic-wave transducers with a ZnO film on glass substrate. Y.Shimizu and T.Hata 384
Unidirectional transducer for Lamb-wave delay lines. K.Toda and Y.Shinoda 363
Unified active structure for an arbitrary 2-port network realisation. C.Andrzej, F.Stefan and O.Stanislaw Errata 491
Uniform diffraction coefficients for an impedance wedge. G.L.James 403
Utilisation of a single inductorless neuristor line section as a voltage-to-frequency convertor. Z.Czarnul and M.Bialko 251

V

V.H.F.-turnstile-antenna performance as a function of antenna geometry on large cylindrical satellites. K.M.Keen 654
Varactor diode, new type of, having strongly nonlinear C/V characteristics. S.Shirota, Y.Togawa and S.Kaneda 360
Variability of atmospheric water-vapour concentration and its implications for microwave-radio-link planning. M.P.M.Hall 650
Variance noise. A.Ambrozy 137
Variance of simulated 1/f noise. A.Ambrozy 224
Variation of attenuation and space diversity with elevation angle on 12 GHz satellite-to-ground radio paths. J.E.Allnutt 346
Variation of canting-angle distribution as a function of wind velocity. B.O.Maher and P.J.Murphy 567
Versatile precision fullwave rectifier. R.W.J.Barker and B.L.Hart 143
Very-high-purity InP l.p.e. layers. K.T.Ip, L.F.Eastman and V.L.Wrick 682
Vibration, effect of, on s.a.w.-oscillator noise spectra. R.D.Weglein and O.W.Otto 103 Errata 272
Visually interactive method to determine the transportation speed of component parts. K.Waddon, A.Pugh and W.B.Heginbotham 86
Voltage-controlled oscillator using an emitter-coupled differential pair. S.B.Roy and D.Patranabis 590
Voltage-sweep-circuit technique employing capacitance magnification. B.L.Hart 130

W

Wave microstrip transducers, multibar magnetostatic-surface-, bandpass filtering with. H.J.Wu, C.N.Smith,Jr., J.H.Collins and J.M.Owens 610
Waveguide antenna, light-controlled semiconductor. R.Karg and E.Kreutzer 246
Waveguide antenna switches using p-i-n diodes. G.Craven and R.R.Thomas 518
Waveguide calculations, numerical instabilities of the moment method in. F.E.Gardiol and P.Haldemann 694
Waveguide, coaxial, low-loss propagation in the dipole-mode along a. H.M.Barlow 108
Waveguide deflector, electro-optical multichannel. H.Sasaki and R.M.De La Rue 295
Waveguide, dielectric-tube, transmission characteristics of a, with an outer higher-index cladding. M.Miyagi and S.Nishida 274

Waveguide feed, dielectric-ring-loaded. A.Kumar and G.A.Hockham 436
Waveguide, frequency response of a surface-acoustic-wave filter using a. M.Yamaguchi, T.Temma, K.Takato and H.Kogo 204
Waveguide limiters, subsidiary resonance, suppression of higher-order. E.Davidson and I.Helszajn 585
Waveguide, low-attenuation corrugated, single-mode operation of. C.G.Parini, P.J.B.Clarricoats and A.D.Oliver 16
Waveguide power divider, tunable Y-type, as standard mismatch. U.Stumper Errata 591
Waveguide, rectangular, bandstop iris for. N.G.Paterson and I.Anderson Errata 35
Waveguide, rectangular-, radiators, flange-mounted rigorous analysis of cross-polarisation in. A.R.Jamieson and T.E.Rozzi 742
Waveguide, rib, propagation and radiation characteristics of. T.S.Bird 401
Waveguide-to-microstrip transitions, design of, specially suited to millimetre-wave applications. L.J.lavedan 604
Waveguides, crosspolarised radiation from, and narrow-angle horns. J.E.Hansen and L.Shafai 313
Waveguides,-diffused,: mode perturbation by thin-film cladding. M.Johnson 67
Wavelength dependence of scintillation fading at 110 and 36 GHz. K.L.Ho and N.D.Mavrokoukoulakis 181
Wavelength dispersion in a single-mode fibre. T.Miyashita, M.Horiguchi and A.Kawana 227
Waves, horizontal shear surface, on a laminated composite. B.A.Auld, G.S.Beaupre and G.Herrmann 525
Wideband equalisation and signal averaging applied to the pulse echo return loss testing of telecommunication coaxial cables. P.Cochrane and J.K.Perkins 481
Winograd's algorithm applied to number-theoretic transforms. D.Bailey 548

X

X-band trapatt amplifiers. C.H.Oxley, A.M.Howard and J.J.Purcell 416
X-ray guides, properties of. P.S.Chung and R.H.Pantell 527

Z

Zero temperature coefficients in overtone lithium-tantalate thickness-mode resonators. J.Detaint 20 Errata 336
Zeros, invariant, computing the, of multivariable systems. Y.Shamash 722
Zeros, transmission, of linear multivariable continuous-time systems. B.Porter and J.J.D'Azzo 753